



Northern New Mexico Citizens' Advisory Board Meeting
November 7, 2018
1:00 p.m. to 5:15 p.m.
The Lodge at Santa Fe
Kachina Ballroom
750 N. St. Francis Drive
Santa Fe, New Mexico 87501

AGENDA



<u>Time</u>	<u>Action</u>	<u>Presenter</u>
1:00 p.m.	Call to Order	Lee Bishop, DDFO
	Welcome and Introductions	Stan Riveles, Chair
	Approval of Agenda	
	Approval of Minutes of September 26, 2018	
1:10 p.m.	Old Business	
	a. Consideration and Action on "Recommendation Regarding Site-Specific Advisory Board Involvement in Enhancing Stakeholder/Public Engagement" (Tabled on 9-26-18)	
	b. Other items	
1:30 p.m.	New Business	
	a. Discussion on DOE's Interpretation of High Level Radioactive Waste (Public Comment Period)	
	b. Other items	
2:00 p.m.	Epidemiological Data for Cancer Rates Downstream of LANL	
	Angela Meisner, New Mexico Tumor Registry University of New Mexico, Health Sciences Center	
3:00 p.m.	Networking Break	
3:30 p.m.	Public Comment Period	
3:45 p.m.	Fiscal Year 2018 Accomplishments	Stephen Hoffman
4:10 p.m.	Update from EM-Los Alamos Field Office	Stephen Hoffman
4:30 p.m.	Update from New Mexico Environment Department	John Kielling
4:50 p.m.	Update from DDFO and Executive Director	L. Bishop and M. Santistevan
5:00 p.m.	Wrap-up Comments from NNMCAB Members	
	a. Were your questions answered regarding the presentations?	
	b. Requests for future presentations or information	
	c. Proposed Recommendations	
5:15 p.m.	Adjourn	Lee Bishop

38659



Northern New Mexico Citizens' Advisory Board Meeting



**September 26, 2018
1:00 p.m. to 5:15 p.m.
Sagebrush Inn
Taos, New Mexico**

Minutes

Meeting Attendees

Department of Energy

1. Doug Hintze, Manager Environmental Management Los Alamos
2. Lee Bishop, Deputy Designated Federal Officer, Environmental Management Los Alamos
3. David Rhodes, Environmental Management Los Alamos
4. Selena Fox, Environmental Management Los Alamos
5. Sara Gilbertson, Environmental Management Los Alamos
6. Arturo Duran, Environmental Management Los Alamos

NNMCAB Members

1. Gerard Martínez y Valencia, NNMCAB Chair
2. Beth Beloff
3. Elena Fernandez
4. Robert Hull
5. Roger Life
6. Daniel Mayfield
7. David Neal
8. Angel Quintana
9. Ulises Ricoy
10. Stanley Riveles
11. Steven Santistevan
12. Stephen Schmelling
13. Deborah Shaw
14. Irene Tse-Pe
15. Michael Valerio

NNMCAB Excused Absences

1. Max Baca
 2. Angelica Gurulé
 3. Jacquelyn Gutierrez
 4. Joshua Madalena
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NNMCAB Absences

1. Alex Puglisi
2. Ashley Sanderson

NNMCAB Staff

1. Menice Santistevan, Executive Director
2. Bridget Maestas, Executive Assistant

Guests

1. Mark White, Taos County Community Distillery
2. Susan Lucas Kamat, New Mexico Environment Department DOE-Oversight Bureau
3. Joe Legare, N3B
4. Sunda Legare, Public
5. Susan McCarthy, LANL Cleanup Working Group
6. Deanna Lujan, Taos Pueblo Environmental
7. Dwayne Pecosky, Taos Pueblo Environmental
8. Bennett Jiron, Taos Pueblo Environmental
9. Tyler Romero, Taos Pueblo Environmental
10. Abran Lujan, Taos Pueblo Environmental
11. Eric Castillo, US Senator Martin Heinrich's Office
12. J.C. Laul, Consultant
13. Jean Stevens, Ranchos de Taos (T.E.F.F.)
14. Jeanne Green, Public
15. Cody Hooks, Taos News
16. David Trujillo, LANL
17. Kent Rich, N3B
18. Brian Shields, Public
19. Kristin Henderson, N3B
20. Mike Powers, Public
21. Allison Scott-Majure, N3B
22. Jessica Moseley, S&K Logistics
23. Steven Horak, Pro2Serve
24. Michele Jacquez-Ortiz, US Senator Tom Udall's Office

***All NNMCAB meetings are recorded. Audio CD's and Video DVD's have been placed on file for review at the NNMCAB Office, 94 Cities of Gold Road, Santa Fe, New Mexico, 87506. The written minutes are intended as a synopsis of the meeting.**

Minutes

I. Call to Order

The meeting of the Northern New Mexico Citizens' Advisory Board (NNMCAB) was held on September 26, 2018 at the Sagebrush Inn Conference Center, Taos, New Mexico. Mr. Lee Bishop, Deputy Designated Federal Officer (DDFO) stated that on behalf of the Department of Energy (DOE) the meeting of the NNMCAB was called to order at 1:06 p.m.

Mr. Bishop recognized Mr. Gerard Martínez y Valencia, the NNMCAB Chair. Mr. Martínez y Valencia presided at the meeting.

The meeting of the NNMCAB was open to the public and posted in The Federal Register in accordance with the Federal Advisory Committee Act.

II. Establishment of a Quorum (12 Needed)

a. Roll Call

Ms. Bridget Maestas conducted roll call as the members arrived. At the call to order, 16 members were present.

III. Welcome and Introductions

Mr. Martínez y Valencia welcomed the members and the public to the meeting. He asked for introductions from the board members and all attending guests.

IV. Approval of Agenda

The board reviewed the agenda for the September 26, 2018 meeting.

Ms. Angel Quintana made a motion to approve the agenda as presented; Dr. Deb Shaw seconded the motion. The motion to approve the agenda as presented was unanimously passed.

V. Approval of Minutes

The board reviewed the minutes from the July 25, 2018 Board Meeting. By ongoing instruction from DOE Headquarters, the minutes were previously reviewed and certified by the NNMCAB Chair. Mr. Martínez y Valencia opened the floor to entertain a motion.

Dr. Stanley Riveles made a motion to approve the minutes as presented; Ms. Irene Tse-Pe seconded the motion. Mr. Martínez y Valencia opened the floor discussion

Ms. Beth Beloff stated that on page 3, line 39, Mr. Beth Beloff should be changed to Ms. Beth Beloff.

With no further discussion, the motion to approve the minutes as presented was unanimously passed.

VI. Old Business

a. Report on EM SSAB Chair's Meeting and EM Cleanup Conference

Mr. Martínez y Valencia gave an overview of the EM SSAB Chairs meeting and the National Cleanup Workshop. He noted that the Chairs meeting was a shortened meeting in conjunction with EMAB and the National Cleanup Workshop. Mr. Martínez y Valencia stated that when they presented the recommendation regarding DOE Order 140.1, half

1 the members did not know what they were talking about and the resolution remained
2 flat and did not result in a Chairs recommendation. He noted that each Board would
3 have to take it up with their own Boards.
4

5 Dr. Riveles stated that his takeaway from this meeting was a better understanding
6 of the diversity of the sites and their perspectives. He noted that they come at it from
7 different points of view because of the nature of their sites. Dr. Riveles provided a
8 written report on the EM SSAB Chairs meeting and the National Cleanup Workshop.
9

10 **b. Consideration and Action on Draft Recommendation 2018-03, "Interface with Defense**
11 **Nuclear Facilities Safety Board"**

12 Ms. Beth Beloff stated that she would personally favor going back to the original
13 language of the recommendation if the NNMCAB were to vote on the recommendation
14 and that they recommend that the Order which has been in effect since May without
15 public hearings, be suspended until these clarifications have been manifest. She noted
16 that it is consistent with both Senator Heinrich and Senator Udall's offices have
17 recommended in the letter to Secretary Perry.
18

19 Mr. Martínez y Valencia opened the floor to entertain a motion.
20

21 Mr. Steven Santistevan made a motion to approve the Recommendation 2018-03,
22 "Interface with Defense Nuclear Facilities Safety Board;" Ms. Cherylin Atcitty seconded
23 the motion. Mr. Martínez y Valencia opened the floor discussion.
24

25 Mr. Danny Mayfield asked Dr. Riveles about the first recommendation, it was for
26 complex wide approval, and now they are asking the NNMCAB to approve for site-
27 specific. He asked if it would be taken back to the Chairs for site-specific approval.
28

29 Mr. Martínez y Valencia stated that this would be up to each individual site to move
30 forward on this and not DOE wide. He noted that it would go to Mr. Hintze and would
31 be moved forward to EM-1.
32

33 Mr. Bishop stated that the other Boards are not obligated to approve or consider
34 this recommendation, but if the Board were to pass this recommendation or a version
35 as amended, then it would be processed as any other recommendation. Mr. Bishop
36 noted that it has Headquarters implications so they would forward it to Headquarters to
37 fashion a response to the NNMCAB.
38

39 Ms. Beloff stated that she is in line with Mr. Mayfield in sharing the
40 recommendation with the other advisory Boards.
41

Dr. Riveles stated that if it were on the NNMCAB and they were to send a strong message to Washington, then he would have no problem with Ms. Beloff's suggestion. He noted that if he thought there were a chance that other Boards would consider the issue, then he would say stick to this recommendation.

Ms. Beloff stated that on line 100 the recommendation should read, "recommends that DOE suspend Order 140.1 until clarification of the outstanding issues as soon as possible." She noted that on line 101, it should read, "The NNMCAB requests such clarification through the EM site manager and the DNFSB representative at LANL and at public forums, if available."

Mr. Mayfield stated that on line 102, strike ",if available." He also noted that on line 125 insert a line indicating what the lifecycle estimate is for site specific for New Mexico for environmental cleanup.

Dr. Riveles stated that he would like to get a reference to WIPP in the recommendation.

Mr. Bishop stated that on line 119, item 8, has a reference to WIPP.

Mr. Martínez y Valencia asked for a show of hands to approve Recommendation 2018-03, with modifications, the motion to approve the recommendation as amended passed.

c. Other Items

Mr. Mayfield stated that regarding repository disposal sites, where is all the waste going, both on the EM and commercial sites. He requested a presentation sometime in the future on all repository sites for both EM and commercial sites.

Mr. Bishop stated that he would take note of that and work it into future agendas.

VII. New Business

a. Consideration and Action on "Recommendation Regarding Site-Specific Advisory Board Involvement in Enhancing Stakeholder/Public Engagement"

Mr. Martínez y Valencia stated that this recommendation was moved forward at the EM SSAB Chairs meeting, but he was reluctant on this because more information is needed. He noted that a similar recommendation was passed nationally at Paducah two years ago, and recommended that it be tabled until the next meeting.

Mr. Schmelling stated that since this came from the Chairs meeting, they could vote up or down. He noted that it could be tabled, but they would not be able to make any modifications, so he does not see any reason to table it.

Mr. Martínez y Valencia stated that he wanted to look at the recommendation passed in Paducah and then come back to this.

Dr. Riveles stated that the recommendation is pretty bland and non-committal and his suggestion would be to vote on it, pass it and schedule a meeting on how the NNMCAB could improve or augment our outreach.

Mr. Danny Mayfield made a motion to table the recommendation until the next meeting, Mr. Bob Hull seconded the motion. By a show of hands, the motion to table the recommendation was passed.

With no other items to discuss, Mr. Martínez y Valencia moved on to the next agenda item.

VIII. Presentation

a. Safety Oversight of Environmental Management Programs at LANL

Sarah Gilbertson, DOE Environmental Management; gave a presentation to the NNMCAB on "Safety Oversight of Environmental Management Programs at LANL." An electronic copy of the presentation may be obtained from the NNMCAB website; <http://www.energy.gov/em/nmncab>. Video of the presentation and questions is also available on the NNMCAB's YouTube Channel (NNMCAB).

b. Questions

Mr. Steve Santistevan asked, when there is an employee that is going to work in the field at a cleanup site, how much training does that employee need to have and do they need to demonstrate any level of competency prior to going out into the field.

Ms. Gilbertson stated that each task requires different sets of training. She noted that one thing they do for all workers in the field is, require them to be a qualified nuclear worker. The training is prescribed off their job duties and each job has an Integrated Work Document.

Mr. Bob Hull asked about the hierarchy of controls in past operations, where they have had to use remote controlled excavators, build temporary facilities over trenches. How are they budgeted for going forward for the more complex areas, for example, MDA C.

Ms. Gilbertson stated that DOE Order 420.1 C is Nuclear Facility Safety and it dictates how you go about doing design. There are additionally other design requirements that flow down from there. She noted that DOE Order 413 which tells you capital project management. There are critical decision phases to go through; 1) demonstrate the need for the facility, 2) go through the design work, and 3) go

1 through the documented safety analysis. She noted that there are many requirements
2 to go through before a nuclear facility is actually built.

3
4 Ms. Beth Beloff asked, since workers have been empowered to talk about safety
5 issues, have there been any whistleblowers.

6
7 Ms. Gilbertson stated that they would not go through her anyway, but if they feel
8 like they are not comfortable talking to her they could go through Mr. Bishop or Mr.
9 Hintze, they are all very receptive to safety concerns.

10
11 Mr. Stephen Schmelling asked what kind of changes to the program were made
12 following the rupture of the drum at WIPP and what have they done in the meantime
13 so it does not happen again.

14
15 Ms. Gilbertson stated that they have done a number of things, the safety culture is
16 one of the things that they have really emphasized since then. She noted that
17 immediately after the incident, they followed their requirements and did an
18 investigation. She noted that they had corrective actions which came out of that,
19 judgement of needs, and they were entered into their issues management system,
20 where they are responsible for resolving those issues.

21
22 Ms. Irene Tse-Pe asked, as far as human nature, people have off days and a worker
23 has a page full of procedures to follow each day, how do you ensure they don't take
24 shortcuts.

25
26 Ms. Gilbertson said that they account for human error rates, if it is a monotonous
27 type thing, you are going to make more mistakes because you got bored or need to
28 get stimulated. She noted that they set time limits on how long workers are allowed
29 to engage in monotonous type work or they use a two man rule, where one does the
30 work and the other worker checks it. Ms. Gilbertson stated that another step is to try
31 to remove humans from the equation as much as possible.

32
33 Dr. Stan Riveles asked if Ms. Gilbertson's office participates in the DNFSB safety
34 evaluations and recommendations and what has been her experience in the
35 usefulness in those.

36
37 Ms. Gilbertson stated that she has never personally reviewed one, but she is
38 relatively new to the office. She noted that she is the DNFSB liaison for the office so
39 she does interact with them quite a bit.

40
41 Ms. Neelam Dhawan wanted to comment that NMED did issue the administrative
42 compliance orders when the WIPP incident occurred. She noted that there were a lot

of requirements where they updated their database and requirements so this mistake would not happen again.

Dr. Ulises Ricoy asked if Ms. Gilbertson could talk about the RCT workers and the training, specifically in New Mexico. He noted that it is not the same as that of a nuclear operator. He asked, what is the education expectation EM would like to see in workers in terms of safety awareness if they were to step foot on Laboratory property.

Ms. Gilbertson stated that N3B is looking at an apprenticeship school at Northern New Mexico College and the University of New Mexico where workers could get on the job training.

IX. Presentation

a. Update on Consent Order Execution

Doug Hintze, DOE EM, Arturo Duran, DOE EM, and Neelam Dhawan, NMED; gave a presentation to the NNMCAB on "Update on Consent Order Execution." An electronic copy of the presentation may be obtained from the NNMCAB website; <http://www.energy.gov/em/nnmcab>. Video of the presentation and questions is also available on the NNMCAB's YouTube Channel (NNMCAB).

b. Questions

Mr. Stephen Schmelling asked what enforceable means.

Mr. Hintze stated that it means it is part of the Consent Order and there is stipulations for fines and penalties within the Consent Order.

Mr. Steven Santistevan asked why there are large differences on the budget spreadsheet in what was requested and what was enacted.

Mr. Hintze stated that one of the things at EM is that they are part of the budget formulation process, and one of the things they look at is the hazard to the workers. He noted that there are other sites out there like Hanford and Savannah River that have waste tanks with high level waste that were built in the early 50s and both sites have some of those tanks that are leaking. It is a matter of prioritization based on risk. Mr. Hintze stated that at LANL, it would be worse to retrieve the waste from below ground and place it above ground. He noted that you want to touch the waste one time, dig it up, treat it and send it off. He stated that from a funding perspective, they might say it is the number 1 priority, but from the DOE, the bigger priority may be to empty the high level waste tanks because of the risks to the environment.

1 Ms. Elena Fernandez asked how does the public communications and hearing
2 process work with this order if the Consent Order allows N3B flexibility to switch
3 projects as needed.
4

5 Mr. Hintze stated that it does not allow N3B to do that. He noted that the Consent
6 Order is only signed by the DOE and NMED and any direction to N3B would flow down
7 from DOE.
8

9 Ms. Fernandez asked if there is a public hearing process.
10

11 Ms. Neelam Dhawan stated that for the annual planning process there is no hearing,
12 it is between DOE and NMED.
13

14 Dr. Stanley Riveles asked if DOE would be able to spend the \$220 million that they
15 got for this fiscal year, late in the year and will they be able to spend it and at the \$220
16 million rate. He also asked about the 10 year campaign that Ann White has asked for.
17

18 Mr. Hintze stated that they will not be able to spend \$220 million. The
19 appropriations came in the March timeframe, but they were spending at the \$190
20 million level. He noted that when the budget did come in, the Office of Management
21 and Budget gives them allocations in 30 day increments, meaning they did not get the
22 money to ramp up. Mr. Hintze stated that the second this is that contract to N3B was
23 not awarded until December and transition did not start until January and didn't take
24 over until April 30th. Mr. Hintze stated that N3B had to start up a brand new company.
25 Mr. Hintze stated that they had a Field Managers meeting before the National
26 Cleanup Conference and they submitted ten year plans. He noted that they believe
27 they can complete the cleanup program within that ten year period.
28

29 Mr. Martínez y Valencia stated that the NNMCAB normally assists the staff with the
30 priorities and asked if the Board would have that opportunity at the next combined
31 committee meeting.
32

33 Ms. Dhawan stated that the priorities have to be finalized by October, because
34 NMED has to make a public presentation in November.
35

36 Mr. Hintze stated that they normally sit down with the NNMCAB in the March
37 timeframe when they are starting the budget formulation process.
38

39 Ms. Beth Beloff asked for a map to visualize where the campaigns are and asked if it
40 would be possible to call a committee meeting to prioritize these campaigns.
41

1 Mr. Martínez y Valencia stated that he would bring it up with staff to see if it can
2 happen in October.

3
4 Mr. Schmelling suggested adding one or two sentences as a description at the start
5 of each campaign.

6
7 Mr. Martínez y Valencia noted that there was a request for an RDX update and the
8 staff was working on that.

9
10 Ms. Cherylin Atcitty stated that her concern was that some of the campaigns had
11 dates starting soon and with the NNMCAB making changes to the priorities, will it
12 impact the milestones or funding issues. She asked if it would be better to work on it
13 next year.

14
15 Dr. Riveles agreed with Ms. Atcitty to work on it next year and prepare well.

16
17 **I. Public Comment**

18 Mr. Martínez y Valencia opened the floor for public comment at 3:35 p.m.

19
20 Mr. Mark White thanked the members for going to Taos. He noted that he is a finance
21 PhD and studies innovation. Mr. White stated that there are lots of opportunities to explore
22 ways of adding value to the economy and he appreciates LANL's support of explorations
23 across New Mexico and in particular, Taos County. He noted that he is looking at a Taos
24 County distillery which will process potatoes from the San Luis Valley for retail sales and
25 provide Hispanos with opportunities to start their own labels. The other project, John
26 Nichols gave permission to put The Milagro Beanfield War on stage in Questa. He noted that
27 the best way to create employment for creative types, would be to combine it with Meow
28 Wolf to get people lined up around the block to see performances by actors and an
29 immersive art installation. Mr. White is hoping to get some advice from LANL on how to
30 switch the distillery that processes grapes to potatoes. He would also like to get advice on
31 fabrication of fun houses that can be moved from one acequia village to another. He noted
32 that he appreciates the support that LANL provides in economic development.

33
34 Ms. Jean Stevens thanked the Board for the opportunity to say a few words. She stated
35 that she has been a resident of Taos for 28 years and she is an alumni of the University of
36 California. Ms. Stevens stated that the United Nations were signing a nuclear disarmament
37 resolution and the people behind it won a Nobel Peace Prize in 2017. She noted that she
38 dreams of a time when all the countries in the world would sign on to this resolution. Ms.
39 Stevens stated that there are about 9 cities and pueblos in northern New Mexico that are
40 part of the Los Alamos Regional Coalition and it has been under recent investigations. She
41 proposes that the \$1 millions of funding be re-directed to the cleanup issues in Los Alamos.
42 Ms. Stevens also has great concerns that about \$25 billion is proposed for LANL over the

1 next 20 years to make the plutonium pit warheads. She noted that there is a history of a lot
2 of near misses, Chernobyl type near misses at Rocky Flats. Ms. Stevens stated that as a
3 down winder living in Taos, who has lived through the fires in Los Alamos, and has met a
4 firefighter who saw explosions coming up underneath the ground. She has great concerns
5 about investing \$25 billion into plutonium pit warheads when there is an arsenal that is way
6 beyond any other countries on the planet. She noted that the shelf life of the plutonium pits
7 are 85 to 100 years, we already have plenty, and the last ones were made in the 70's and
8 80's. Ms. Stevens believes that the \$25 billion should be invested in electric cars and to
9 research for getting off of fossil fuels and putting money into solar and wind power which
10 New Mexico is abundantly wealthy in.

11
12 Ms. Jeanne Greene stated that she did not prepare a statement, but wanted to remark
13 on some of the items discussed. She noted that she was hoping to hear the presentation on
14 the consent order before the citizen's comments. Ms. Greene thanked Ms. Beloff for
15 recommending suspension on Order 140.1, although she would say suspension until it is
16 determined what it means. She stated that it means that the DNFSB would not have access
17 to do inspections at LANL. Ms. Greene stated that it is not ok and she would suggest that
18 Order 140.1 needs to be completely suspended period. She noted that we need an oversight
19 agency and DOE cannot be its own oversight agency. Ms. Greene thanked Sarah for her
20 presentation, but to talk about black widows and soap in the bathroom, she stated that they
21 are not talking about soap in the bathroom, they are talking about serious accidents that
22 could affect the entire state or even the entire country. Ms. Greene stated that if you look at
23 maps of the plume of smoke that went over the Dixon Valley and the samples that have
24 been taken that show plutonium on top of Picuris Peak, there is Strontium-90 in Dixon, and
25 there is radioactive materials in our food. She noted that the DNFSB Board is the only one
26 that has had the nerve to say that we need some safety regulations here. Ms. Greene stated
27 that if safety is the prime focus, then why doesn't the Environmental Management office
28 demand that pit production be stopped until we don't have these safety accidents that
29 endanger all of us. Ms. Greene noted that on the consent order, please demand to go back
30 to the 2005 Consent Order because this consent order eviscerated that one and we no
31 longer have protection.

32
33 Ms. Michelle Jacquez Ortiz stated that she is with Senator Tom Udall's office and wanted
34 to clarify some of the questions that she had on some of the information that was presented
35 earlier. Ms. Jacquez Ortiz stated that there are three specific things that Senator Heinrich
36 and Senator Udall did related to the DNFSB.

- 37 1) August 29, 2018 - Sent a letter to the Energy and Water Subcommittee on
38 Appropriations to the ranking members, Alexander and Feinstein. The two requests
39 in this letter were, that the report language include a prohibition on any funds from
40 being used to support the DNFSB reorganization and language that suspended the
41 Order. Ms. Jacquez Ortiz stated that the reorganization was prevented by the
42 language in the bill, but the suspension on the Order did not stick.

- 2) September 5, 2018 - Sent a letter to Secretary Perry asking DOE to suspend the Order and to give the DNFSB members time to provide comments and feedback including issues raised by stakeholders at planned public meetings. She noted that the meetings have not been identified yet.
- 3) September 14, 2018 - Sent a letter to the Chair of the DNFSB asking for a public hearing in New Mexico so that the Board can better assess the impact of the new Order that includes a heavy New Mexico perspective with our three DOE facilities.

With no further public comment Mr. Martínez y Valencia closed the comment period at 3:52 p.m.

II. Update from EM-Los Alamos Field Office

Mr. Hintze stated that he is happy about having an appropriation before the fiscal year starts. He noted that the last time we had this was 1997. Mr. Hintze stated that it allows them to prepare their baseline to start the ramp up process knowing that they are getting the funds. Mr. Hintze stated that the M&O Contractor that operates the site is in transition and the new company will take over November 1, 2018. Mr. Hintze stated that as a result of the 3706 campaign, they continued to ship waste to Waste Control Specialists (WCS) in Texas. He noted that there are 113 drums at WCS. He stated that a feasibility study was delivered at the end of June and it identified three things:

- 1) The waste would be treated at WCS under a Nuclear Regulatory Commission framework with the EPA and would cost upwards of \$300 million.
- 2) The waste would be brought back to Los Alamos.
- 3) They are conducting an extensive study with Sandia National Laboratory and Savannah River National Laboratory to see if that waste has the chemical reactions or if the energy has dissipated and could be shipped straight to WIPP.

Mr. Hintze stated that it could be close to another year before they can make a decision on any of those options.

III. Update from NMED

Ms. Neelam Dhawan stated that for LANL they issues a new Class 1 permit modification request for the new contractor, Triad which will be effective November 1st. She stated that they gave two extensions for the milestones, one for R69 and the other for the amendments plan and all other milestones have been met for this year. Ms. Dhawan stated that for Chromium groundwater, the Interim Measure is working on the southern boundary. She noted that they approved the conversion of CrIN-6 to CrEX-5. She stated that they have agreed on the location of well R70 which will be east of CrIN-6 where they found higher concentrations. She also gave the following updates:

- Phase I is ongoing and given an extension.
- NMED issued 26 certificated of completed for TA-21 on September 4th.
- Supplemental report for 3-mile canyon was approved on August 28th.

- They discovered a new SWMU 2014 in the middle of LA Canyon where they discovered PCB contamination.
- SEPs are all on time.

Ms. Dhawan stated that for WIPP, the Class 3 Permit Modification for panel closure was issued on September 7th and the volume of record discussions are ongoing, they issued the draft permit on August 6th and the public hearing is scheduled for August 23rd. WIPP shipments as of August 20th, they have received 216 shipments from Idaho, Savannah River, and WCS. She noted that 4,453 containers have been set in place. Ms. Dhawan stated that the next audit would be in the Spring and Summer of 2019.

a. Questions

Mr. Bob Hull asked of the feasibility study was a public report.

Mr. Hintze stated that he would have Ms. Santistevan send it out.

IV. Update from DDFO and Executive Director

Mr. Bishop, for the sake of staying on schedule, asked the members to review the Executive Directors report on the purple sheet. Mr. Bishop presented Mr. Martínez y Valencia with a certificate of appreciation for serving as the NNMCAB Chair.

Ms. Santistevan thanked Mr. Martínez y Valencia for serving two years as the NNMCAB Chair. She stated that there are four members going off the Board in April and the NNMCAB is recruiting new members. She asked that if any of the members knew of anyone wishing to serve on the Board to please let her know. Ms. Santistevan stated that the next meeting would be at The Lodge at Santa Fe and the NM Tumor Registry would be presenting on New Mexico cancer rates and autoimmune.

V. Wrap-up and Comments

Ms. Angel Quintana thanked the presenters.

Ms. Elena Fernandez thanked everyone for the presentations and answering her questions. She asked that in the future, the NNMCAB hears more about N3B and their infrastructure.

Dr. Stanley Riveles congratulated Mr. Martínez y Valencia for his excellent service as the NNMCAB Chair. He noted that it was a very interesting and action packed meeting. Dr. Riveles requested that N3B give a report on the programs that it is doing in the educational apprenticeship field to see how their public outreach is doing.

Mr. Stephen Schmelling thanked Mr. Martínez y Valencia for his leadership. He noted that it was a really interesting meeting and that they covered a lot of topics; it took longer than expected but it was worthwhile.

Ms. Cherylin Atcitty thanked everyone and asked that the members travel safely.

Mr. Roger Life thanked Mr. Martínez y Valencia for his service. He thanked everyone for the presentations.

Mr. Steven Santistevan thanked the presenters. He noted that he believed the meeting was very worthwhile and important topics were covered. He thanked Mr. Martínez y Valencia for his leadership and looks forward to having Dr. Riveles as the new Chairman.

Ms. Beth Beloff thanked everyone for their presentations. She thanked Mr. Martínez y Valencia for his leadership and also stated that she is sad to see Mr. Bishop reassigned and would like to see if he could stay. Ms. Beloff looks forward to Dr. Riveles' leadership.

Mr. Bob Hull thanked Mr. Martínez y Valencia for his service and appreciates Dr. Riveles stepping up as Chair.

Mr. David Neal thanked Mr. Martínez y Valencia for his service and the presenters for the great presentations.

Mr. Danny Mayfield welcomed everyone at the meeting, especially the new members. He stated that Mr. Bishop is phenomenal and an asset to the organization he represents. Mr. Mayfield noted that he has learned so much from Mr. Bishop and he has always been forthright and honest and will be sorely missed.

Mr. Martínez y Valencia thanked the public for being there and for their public comments.

VI. Adjournment

Mr. Bishop stated that the next meeting would be November 7, 2018 and that it would be his last meeting. Mr. Bishop thanked Mr. Martínez y Valencia for his service.

With no additional business to discuss, Mr. Martínez y Valencia adjourned the meeting at 5:27 p.m.

1 Respectfully Submitted,

2 

3 Mr. Stanley Riveles, Chair, NNMCAB

4 *Minutes prepared by Bridget Maestas, Executive Assistant, NNMCAB

5
6 **Attachments**

- 7 1. Final NNMCAB Meeting Agenda for 09/26/2018
- 8 2. Final NNMCAB Meeting Minutes for 07/25/2018
- 9 3. Draft Recommendation 2018-03, "Interface with Defense Nuclear Facilities Safety Board"
- 10 4. EM SSAB Chairs Recommendation to the Department of Energy, "Recommendation Regarding
- 11 Site-Specific Advisory Board Involvement in Enhancing Stakeholder/Public Engagement"
- 12 5. Presentation by Elizabeth Gilbertson, "Nuclear Safety: What it Means at Los Alamos National
- 13 Laboratory"
- 14 6. Presentation by Doug Hintze, "2016 Compliance Order on Consent Progress Update"
- 15 7. Handout, 2016 Compliance Order on Consent – Appendix B Milestones and Targets
- 16 8. Handout, Biography, Arturo Duran, Presenter at the September 26, 2018 NNMCAB Meeting
- 17 9. Report from the Executive Director, Menice Santistevan

NNMCAB Meeting Minutes 09-26-18 Board Meeting

1 **Public Notice:**

2 ***All NNM CAB meetings are recorded. Audio CD's and Video DVD's have been placed on file for review**
3 **at the NNM CAB office, 94 Cities of Gold Road, Santa Fe, New Mexico, 87506. The written minutes are**
4 **intended as a synopsis of the meeting.**

EM SSAB Chairs
Recommendation to the Department of Energy
Recommendation Regarding Site-Specific Advisory Board Involvement in Enhancing
Stakeholder/Public Engagement

Background

The Environmental Site-Specific Advisory Board (EM SSAB) understands that successful completion of the DOE-EM mission must include community, public and stakeholder education and engagement. This engagement can be developed and implemented in any of several different forms that reflect the public interest in; stage of cleanup combined with the complexity and uniqueness of each of the cleanup sites managed by DOE-EM.

Because of the variety of sites and different cleanup schedules, we are presenting a suite of potential activities that can be implemented at varying levels at each of the sites but are applicable to all in some form. Individual site-specific advisory boards are in the perfect position to help develop and recommend implementation strategies on each of these activities. Advisory board involvement would help the site enhance its outreach by providing advice related to specific targeted areas based on feedback from actual communities and individuals who live near or are potentially impacted by site activities.

Potential Activities:

- Site managers and/or designees should work with their advisory board to determine the additional needs for public information exchange and opportunities for engagement. Specifically, this can be done using a Community Analysis or previously collected data from public meeting attendance, outreach efforts, etc. To determine the level of public interest, these activities may include a far reaching individual regional community analysis; polling selected public interest groups; polling advisory board members, etc. Include the site specific advisory board in developing questions for the community analysis if that method of obtaining information is chosen. Advisory Board members could provide specific recommendations to the site manager related to improving outreach efforts in particular affected communities.
- Prepare a one-page or three-fold handout of their site's information sources listed – with videos, speakers, topics, websites, tour information, etc. Send it to each applicable Chamber of Commerce with a request to further provide to local civic and service organizations, churches, veterans groups, senior centers and libraries with a suggested transmittal letter.
- Develop a virtual reality tour that includes clear, in-depth information that will help the public understand the depth and breadth of cleanup decisions and activities. Provide this to the public and local and regional educational institutions.
- Enhance educational outreach:
 - Develop a site-specific program educational exhibit booth(s) with handouts and educational tools that assist educators (from elementary school level through college) with the history and legacy of the site.

- Coordinate with local and regional school districts and college departments that teach environmental science to develop a relationship and inform them about the environmental educational sources and include a site tour for educators.
- Develop displays (could be 3D) located in public and educational libraries that provide in-depth information on one or more site subjects; i.e. upcoming cleanup decisions soliciting public comment; site successes/challenges, transportation routes; identifying websites for more info, etc. These should be updated regularly/quarterly – especially for time-sensitive information.

Recommendation

We recommend that the individual site managers/designees and their advisory boards work together to discuss and determine which activities best suit their circumstances and respond to public needs. The detail, depth, and implementation plan should result from this collaborative effort.

References

1. ***“Recommendation for Approval of Community Analysis Plan” Nevada Site-Specific Advisory Board, January 17, 2018.***
https://www.nnss.gov/nssab/docs/Recommendations/R_FY18/NSSAB%20Recommendation%20for%20Approval%20of%20Community%20Analysis%20Plan%20FINAL%2001-17-18.pdf

DISCLAIMER: *This document, concerning the Department of Energy's proposed interpretation of the statutory term "high-level radioactive waste", is an action issued by the Department. Though it is not intended or expected, should any discrepancy occur between the document posted here and the document published in the Federal Register, the Federal Register publication controls. This document is being made available through the Internet solely as a means to facilitate the public's access to this document.*

[6450-01-P]

DEPARTMENT OF ENERGY

Request for Public Comment on the U.S. Department of Energy Interpretation of High-Level Radioactive Waste

AGENCY: Office of Environmental Management, U.S. Department of Energy.

ACTION: Notice of public comment period.

SUMMARY: The U.S. Department of Energy (DOE or the Department) provides this Notice and request for public comment on its interpretation of the definition of the statutory term "high-level radioactive waste" (HLW) as set forth in the Atomic Energy Act of 1954 and the Nuclear Waste Policy Act of 1982. This statutory term indicates that not all wastes from the reprocessing of spent nuclear fuel ("reprocessing wastes") are HLW, and DOE interprets the statutory term such that some reprocessing wastes may be classified as not HLW (non-HLW) and may be disposed of in accordance with their radiological characteristics.

DATES: DOE invites stakeholders to submit written comments on its interpretation. The 60-day public comment period begins on [INSERT DATE OF PUBLICATION IN THE

FEDERAL REGISTER] and ends on **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Only comments received through one of the methods described below will be accepted. DOE will consider all comments received or postmarked by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Please direct comments to:

- a) *Email:* Send comments to *HLWnotice@em.doe.gov*. Please submit comments in Microsoft™ Word, or PDF file format, and avoid the use of encryption.
- b) *Mail:* Send to the following address: Theresa Kliczewski, U.S. Department of Energy, Office of Environmental Management, Office of Waste and Materials Management (EM-4.2), 1000 Independence Avenue, S.W., Washington, DC 20585.

FOR FURTHER INFORMATION CONTACT: Theresa Kliczewski at *HLWnotice@em.doe.gov* or at U.S. Department of Energy, Office of Environmental Management, Office of Waste and Materials Management (EM-4.2), 1000 Independence Avenue, S.W., Washington, DC 20585. Telephone: (202) 586-3301.

SUPPLEMENTARY INFORMATION

A. Background

DOE manages large inventories of legacy waste resulting from spent nuclear fuel (SNF) reprocessing activities from atomic energy defense programs, *e.g.*, nuclear weapons production. DOE also manages a small quantity of vitrified waste from a demonstration of commercial SNF reprocessing. Reprocessing generally refers to the dissolution of irradiated SNF in acid,

generating liquid or viscous wastes, and the chemical processing to separate the fission products or transuranic elements of the SNF from the desired elements of plutonium and uranium, which are recovered for reuse. Liquid reprocessing wastes have been or are currently stored in large underground tanks at three DOE sites: Savannah River Site (SRS) (South Carolina), Idaho National Laboratory (INL) (Idaho), and the Office of River Protection at the Hanford Site (Washington). Solid reprocessing wastes are liquid wastes that have been immobilized in solid form and are currently stored at SRS, INL, and the West Valley Demonstration Project (New York).

DOE's interpretation of HLW is that reprocessing waste is non-HLW if the waste:

- I. Does not exceed concentration limits for Class C low-level radioactive waste as set out in section 61.55 of title 10, Code of Federal Regulations; or
- II. Does not require disposal in a deep geologic repository and meets the performance objectives of a disposal facility as demonstrated through a performance assessment conducted in accordance with applicable regulatory requirements.

Under DOE's interpretation, waste meeting either of these criteria is non-HLW and may be classified and disposed of in accordance with its radiological characteristics.

At this time, DOE is not making - and has not made - any decisions on the disposal of any particular waste stream. Disposal decisions, when made, will be based on the consideration of public comments in response to this Notice and prior input and consultation with appropriate state and local regulators and stakeholders. DOE will continue its current practice of managing all its reprocessing wastes as if they were HLW unless and until a specific waste is determined to be another category of waste based on detailed technical assessments of its characteristics and an evaluation of potential disposal pathways.

B. High-Level Waste Interpretation

DOE interprets the term “high-level radioactive waste”, as stated in the Atomic Energy Act of 1954 as amended (AEA),¹ and the Nuclear Waste Policy Act of 1982 as amended (NWPA)² in a manner that defines DOE reprocessing wastes to be classified as either HLW or non-HLW based on the radiological characteristics of the waste and their ability to meet appropriate disposal facility requirements. The basis for DOE’s interpretation comes from the AEA and NWPA definition of HLW:

- (A) the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and
- (B) other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation.³

In paragraph A, Congress limited HLW to those materials that are both “highly radioactive” and “resulting from the reprocessing of spent nuclear fuel.” Reprocessing generates liquid wastes, with the first cycle of reprocessing operations containing the majority of the fission products and transuranic elements removed from the SNF. Thus, in paragraph A, Congress distinguished HLW with regard to its form as both “liquid waste produced directly in reprocessing” and “any solid material derived from such liquid waste that contains fission products in sufficient concentrations.”

In paragraph B, Congress defined HLW also to include “other highly radioactive material” that the Nuclear Regulatory Commission (NRC) determines by rule “requires permanent isolation.” HLW under paragraph B includes highly radioactive material regardless

¹ 42 U.S.C. 2011 *et seq.* This definition of HLW was first enacted in the Nuclear Waste Policy Act of 1982, as amended, and incorporated into the AEA in 1988.

² 42 U.S.C. 10101 *et seq.*

³ 42 U.S.C. 10101(12)(A), (B).

of whether the waste is from reprocessing or some other activity. Further, under paragraph B, classification of material as HLW is based on its radiological characteristics and whether the material requires permanent isolation.

The common element of these statutory paragraphs defining HLW is the requirement and recognition that the waste be “highly radioactive.” Additionally, both paragraphs reflect a primary purpose of the NWPA, which is to define those materials for which disposal in a deep geologic repository is the only method that would provide reasonable assurance that the public and the environment will be adequately protected from the radiological hazards the materials pose.

The terms “highly radioactive,” and “sufficient concentrations” are not defined in the AEA or the NWPA. By providing in paragraph A that liquid reprocessing waste is HLW only if it is “highly radioactive,” and that solid waste derived from liquid reprocessing waste is HLW only if it is “highly radioactive” and contains fission products in “sufficient concentrations” without further defining these standards, Congress left it to DOE to determine when these standards are met. Given Congress’ intent that not all reprocessing waste is HLW, it is appropriate for DOE to use its expertise to interpret the definition of HLW, consistent with proper statutory construction, to distinguish waste that is non-HLW from waste that is HLW.

The DOE interpretation is informed by the radiological characteristics of reprocessing waste and whether the waste can be disposed of safely in a facility other than a deep geologic repository. This interpretation is based upon the principles of the NRC’s regulatory structure for the disposal of low-level radioactive wastes⁴.

⁴ NRC licensing requirements for the land disposal of LLW, originally promulgated in 1962, are codified in Part 61 of the Code of Federal Regulations, 10 CFR part 61.

In its regulations, NRC has identified four classes of low-level radioactive waste (LLW) – Class A, B or C – for which near-surface disposal is safe for public health and the environment, and greater-than-Class C LLW for which near-surface disposal may be safe for public health and the environment. This waste classification regime is based on the concentration levels of a combination of specified short-lived and long-lived radionuclides in a waste stream, with Class C LLW having the highest concentration levels. Waste that exceeds the Class C levels is evaluated on a case-specific basis to determine whether it requires disposal in a deep geologic repository, or whether an alternative disposal facility can be demonstrated to provide safe disposal. The need for disposal in a deep geologic repository results from a combination of two radiological characteristics of the waste: high activity radionuclides, including fission products, which generate high levels of radiation; and long-lived radionuclides which, if not properly disposed of, would present a risk to human health and the environment for hundreds of thousands of years.

Because the NRC has long-standing regulations that set concentration limits for radionuclides in waste that is acceptable for near-surface disposal, it is reasonable to interpret “highly radioactive” to mean, at a minimum, radionuclide concentrations greater than the Class C limits. Reprocessing waste that does not exceed the Class C limits is non-HLW.

DOE interprets “sufficient concentrations” in the statutory context in which the definition was enacted, which, as discussed above, is focused on protecting the public and the environment from the hazards posed by nuclear waste. In addition to the characteristics of the waste itself, the risk that reprocessing waste poses to human health and the environment depends on the physical characteristics of the disposal facility and that facility’s ability to safely isolate the waste from the human environment. Relevant characteristics of a disposal facility may include the depth of disposal, use of engineered barriers, and geologic, hydrologic, and geochemical features of the

site. Taking these considerations into account, it is reasonable to interpret “sufficient concentrations” to mean concentrations of fission products in combination with long-lived radionuclides that would require disposal in a deep geologic repository.

Accordingly, under DOE’s interpretation, solid waste that exceeds the NRC’s Class C limits would be subject to detailed characterization and technical analysis of the radiological characteristics of the waste. This, combined with the physical characteristics of a specific disposal facility and the method of disposal, would determine whether the facility could meet its performance objectives, and if the waste can be disposed of safely. This approach would be governed by the waste characterization and analysis process and performance objectives for the disposal facility established by the applicable regulator, and thereby protective of human health and the environment.

The DOE interpretation does not require the removal of key radionuclides to the maximum extent that is technically and economically practical before DOE can define waste as non-HLW. Nothing in the statutory text of the AEA or the NWPA requires that radionuclides be removed to the maximum extent technically and economically practical prior to determining whether waste is HLW. DOE has determined that the removal of radionuclides from waste that already meets existing legal and technical requirements for safe transportation and disposal is unnecessary and inefficient, and does not benefit human health or the environment. To the contrary, it potentially presents a greater risk to human health and the environment because it prolongs the temporary storage of waste.

Therefore, under DOE’s interpretation, waste resulting from the reprocessing of SNF is non-HLW if the waste:

- I. Does not exceed concentration limits for Class C low-level radioactive waste as set out in section 61.55 of title 10, Code of Federal Regulations; or

- II. Does not require disposal in a deep geologic repository and meets the performance objectives of a disposal facility as demonstrated through a performance assessment conducted in accordance with applicable regulatory requirements.

Reprocessing waste meeting either I or II of the above is non-HLW, and may be classified and disposed in accordance with its radiological characteristics in an appropriate facility provided all applicable requirements of the disposal facility are met.

C. Request for Comments

The Department specifically requests comments on its interpretation that reprocessing waste meeting either of the two criterion stated above is non-HLW. This Notice is intended to solicit public feedback on the DOE interpretation to better understand stakeholder perspectives prior to appropriate input and consultation with affected state and local regulators and any waste disposal classification decisions.

The Department will consider all comments received during the public comment period, and modify its proposed approach, as appropriate, based on public comment.

Signed at Washington, DC on October 4, 2018

/s/ Anne Marie White

Anne Marie White, Assistant Secretary
for Environmental Management

compartment temperature from falling below 42 °F.

DOE has reviewed PAPRSA's waiver extension request in Case Number RF-043. Based on this review, DOE has determined that the basic model specified in PAPRSA's current waiver extension request incorporates the same design characteristics as those basic models covered under the waiver in Case Number RF-043 such that the DOE test procedure evaluates that basic model in a manner that is unrepresentative of its actual energy use. DOE also determined that applying the alternate procedure specified in Case Number RF-043 will allow for the accurate measurement of the energy use of the consumer refrigerator basic model identified by PAPRSA in its waiver extension request.

III. Order

After careful consideration of all the material submitted by PAPRSA in this matter, it is *Ordered that*:

(1) PAPRSA must, as of the date of publication of this Extension of Waiver in the **Federal Register**, test and rate the combination cooler-refrigerator basic model PR5181JKBC as set forth in paragraph (2).

(2) The alternate test procedure for the basic model listed in paragraph (1) is the test procedure in 10 CFR part 430, subpart B, appendix A, with the exception that PAPRSA must calculate energy consumption using a correction factor ("K-factor") of 0.85, as follows.

The energy consumption is defined by:

If compartment temperatures are below their respective standardized temperatures for both test settings (according to 10 CFR part 430, subpart B, appendix A, sec. 6.2.4.1):

$$E = (ET1 \times 0.85) + IET.$$

If compartment temperatures are not below their respective standardized temperatures for both test settings, the higher of the two values calculated by the following two formulas (according to 10 CFR part 430, subpart B, appendix A, sec. 6.2.4.2):

Energy consumption of the "cooler compartment":

$$ECooler\ Compartment = (ET1 + [(ET2 - ET1) \times (55^\circ F - TW1) / (TW2 - TW1)]) \times 0.85 + IET$$

Energy consumption of the "fresh food compartment":

$$EFreshFood\ Compartment = (ET1 + [(ET2 - ET1) \times (39^\circ F - TBC1) / (TBC2 - TBC1)]) \times 0.85 + IET.$$

(3) *Representations.* PAPRSA may not make representations about the energy consumption of the combination cooler-refrigerator identified in paragraph (1) of

this section for compliance, marketing, or other purposes unless that basic model has been tested in accordance with the provisions set forth above and such representations fairly disclose the results of such testing.

(4) This Extension of Waiver shall remain in effect consistent with the provisions of 10 CFR 430.27. This Order will terminate on October 28, 2019, in conjunction with the compliance date that applies to the standards published on October 28, 2016 for miscellaneous refrigeration products ("MREFs"). See 81 FR 75194 (Oct. 28, 2016). Testing to demonstrate compliance with those standards must be performed in accordance with the MREF test procedure final rule. See 81 FR 46768 (July 18, 2016) (MREF test procedure final rule) and 81 FR 49868 (July 29, 2016) (MREF test procedure final rule correction notice).

(5) This Extension of Waiver is issued on the condition that the statements, representations, and documents provided by PAPRSA are valid. If PAPRSA makes any modifications to the controls or configurations of these basic models, the waiver will no longer be valid and PAPRSA will either be required to use the current Federal test method or submit a new application for a test procedure waiver. DOE may rescind or modify this Extension of Waiver at any time if it determines the factual basis underlying the petition for extension of waiver is incorrect, or the results from the alternate test procedure are unrepresentative of the basic models' true energy consumption characteristics. 10 CFR 430.27(k)(1). Likewise, PAPRSA may request that DOE rescind or modify the Extension of Waiver if the petitioner discovers an error in the information provided to DOE as part of its petition, determines that the Extension of Waiver is no longer needed, or for other appropriate reasons. 10 CFR 430.27(k)(2).

(6) Granting of this Extension of Waiver does not release PAPRSA from the certification requirements set forth at 10 CFR part 429.

Signed in Washington, DC, on October 2, 2018.

Kathleen B. Hogan,

Deputy Assistant Secretary for Energy Efficiency, Energy Efficiency and Renewable Energy.

[FR Doc. 2018-22003 Filed 10-9-18; 8:45 am]

BILLING CODE 6450-01-P

DEPARTMENT OF ENERGY

Request for Public Comment on the U.S. Department of Energy Interpretation of High-Level Radioactive Waste

AGENCY: Office of Environmental Management, U.S. Department of Energy.

ACTION: Notice of public comment period.

SUMMARY: The U.S. Department of Energy (DOE or the Department) provides this Notice and request for public comment on its interpretation of the definition of the statutory term "high-level radioactive waste" (HLW) as set forth in the Atomic Energy Act of 1954 and the Nuclear Waste Policy Act of 1982. This statutory term indicates that not all wastes from the reprocessing of spent nuclear fuel ("reprocessing wastes") are HLW, and DOE interprets the statutory term such that some reprocessing wastes may be classified as not HLW (non-HLW) and may be disposed of in accordance with their radiological characteristics.

DATES: DOE invites stakeholders to submit written comments on its interpretation. The 60-day public comment period begins on October 10, 2018 and ends on December 10, 2018. Only comments received through one of the methods described below will be accepted. DOE will consider all comments received or postmarked by December 10, 2018.

ADDRESSES: Please direct comments to:

(a) *Email:* Send comments to HLWnotice@em.doe.gov. Please submit comments in Microsoft™ Word, or PDF file format, and avoid the use of encryption.

(b) *Mail:* Send to the following address: Theresa Kliczewski, U.S. Department of Energy, Office of Environmental Management, Office of Waste and Materials Management (EM-4.2), 1000 Independence Avenue SW, Washington, DC 20585.

FOR FURTHER INFORMATION CONTACT:

Theresa Kliczewski at HLWnotice@em.doe.gov or at U.S. Department of Energy, Office of Environmental Management, Office of Waste and Materials Management (EM-4.2), 1000 Independence Avenue SW, Washington, DC 20585. Telephone: (202) 586-3301.

SUPPLEMENTARY INFORMATION:

A. Background

DOE manages large inventories of legacy waste resulting from spent nuclear fuel (SNF) reprocessing activities from atomic energy defense programs, e.g., nuclear weapons

production. DOE also manages a small quantity of vitrified waste from a demonstration of commercial SNF reprocessing. Reprocessing generally refers to the dissolution of irradiated SNF in acid, generating liquid or viscous wastes, and the chemical processing to separate the fission products or transuranic elements of the SNF from the desired elements of plutonium and uranium, which are recovered for reuse. Liquid reprocessing wastes have been or are currently stored in large underground tanks at three DOE sites: Savannah River Site (SRS) (South Carolina), Idaho National Laboratory (INL) (Idaho), and the Office of River Protection at the Hanford Site (Washington). Solid reprocessing wastes are liquid wastes that have been immobilized in solid form and are currently stored at SRS, INL, and the West Valley Demonstration Project (New York).

DOE's interpretation of HLW is that reprocessing waste is non-HLW if the waste:

- I. Does not exceed concentration limits for Class C low-level radioactive waste as set out in section 61.55 of title 10, Code of Federal Regulations; or
- II. Does not require disposal in a deep geologic repository and meets the performance objectives of a disposal facility as demonstrated through a performance assessment conducted in accordance with applicable regulatory requirements.

Under DOE's interpretation, waste meeting either of these criteria is non-HLW and may be classified and disposed of in accordance with its radiological characteristics.

At this time, DOE is not making—and has not made—any decisions on the disposal of any particular waste stream. Disposal decisions, when made, will be based on the consideration of public comments in response to this Notice and prior input and consultation with appropriate state and local regulators and stakeholders. DOE will continue its current practice of managing all its reprocessing wastes as if they were HLW unless and until a specific waste is determined to be another category of waste based on detailed technical assessments of its characteristics and an evaluation of potential disposal pathways.

B. High-Level Waste Interpretation

DOE interprets the term “high-level radioactive waste”, as stated in the Atomic Energy Act of 1954 as amended (AEA),¹ and the Nuclear Waste Policy

Act of 1982 as amended (NWPAA)² in a manner that defines DOE reprocessing wastes to be classified as either HLW or non-HLW based on the radiological characteristics of the waste and their ability to meet appropriate disposal facility requirements. The basis for DOE's interpretation comes from the AEA and NWPAA definition of HLW:

(A) the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and

(B) other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation.³

In paragraph A, Congress limited HLW to those materials that are both “highly radioactive” and “resulting from the reprocessing of spent nuclear fuel.” Reprocessing generates liquid wastes, with the first cycle of reprocessing operations containing the majority of the fission products and transuranic elements removed from the SNF. Thus, in paragraph A, Congress distinguished HLW with regard to its form as both “liquid waste produced directly in reprocessing” and “any solid material derived from such liquid waste that contains fission products in sufficient concentrations.”

In paragraph B, Congress defined HLW also to include “other highly radioactive material” that the Nuclear Regulatory Commission (NRC) determines by rule “requires permanent isolation.” HLW under paragraph B includes highly radioactive material regardless of whether the waste is from reprocessing or some other activity. Further, under paragraph B, classification of material as HLW is based on its radiological characteristics and whether the material requires permanent isolation.

The common element of these statutory paragraphs defining HLW is the requirement and recognition that the waste be “highly radioactive.” Additionally, both paragraphs reflect a primary purpose of the NWPAA, which is to define those materials for which disposal in a deep geologic repository is the only method that would provide reasonable assurance that the public and the environment will be adequately protected from the radiological hazards the materials pose.

The terms “highly radioactive,” and “sufficient concentrations” are not

defined in the AEA or the NWPAA. By providing in paragraph A that liquid reprocessing waste is HLW only if it is “highly radioactive,” and that solid waste derived from liquid reprocessing waste is HLW only if it is “highly radioactive” and contains fission products in “sufficient concentrations” without further defining these standards, Congress left it to DOE to determine when these standards are met. Given Congress' intent that not all reprocessing waste is HLW, it is appropriate for DOE to use its expertise to interpret the definition of HLW, consistent with proper statutory construction, to distinguish waste that is non-HLW from waste that is HLW.

The DOE interpretation is informed by the radiological characteristics of reprocessing waste and whether the waste can be disposed of safely in a facility other than a deep geologic repository. This interpretation is based upon the principles of the NRC's regulatory structure for the disposal of low-level radioactive wastes.⁴

In its regulations, NRC has identified four classes of low-level radioactive waste (LLW)—Class A, B or C—for which near-surface disposal is safe for public health and the environment, and greater-than-Class C LLW for which near-surface disposal may be safe for public health and the environment. This waste classification regime is based on the concentration levels of a combination of specified short-lived and long-lived radionuclides in a waste stream, with Class C LLW having the highest concentration levels. Waste that exceeds the Class C levels is evaluated on a case-specific basis to determine whether it requires disposal in a deep geologic repository, or whether an alternative disposal facility can be demonstrated to provide safe disposal. The need for disposal in a deep geologic repository results from a combination of two radiological characteristics of the waste: High activity radionuclides, including fission products, which generate high levels of radiation; and long-lived radionuclides which, if not properly disposed of, would present a risk to human health and the environment for hundreds of thousands of years.

Because the NRC has long-standing regulations that set concentration limits for radionuclides in waste that is acceptable for near-surface disposal, it is reasonable to interpret “highly radioactive” to mean, at a minimum,

¹ 42 U.S.C. 2011 *et seq.* This definition of HLW was first enacted in the Nuclear Waste Policy Act of 1982, as amended, and incorporated into the AEA in 1988.

² 42 U.S.C. 10101 *et seq.*

³ 42 U.S.C. 10101(12)(A), (B).

⁴ NRC licensing requirements for the land disposal of LLW, originally promulgated in 1962, are codified in Part 61 of the Code of Federal Regulations, 10 CFR part 61.

¹ 42 U.S.C. 2011 *et seq.* This definition of HLW was first enacted in the Nuclear Waste Policy Act

radionuclide concentrations greater than the Class C limits. Reprocessing waste that does not exceed the Class C limits is non-HLW.

DOE interprets "sufficient concentrations" in the statutory context in which the definition was enacted, which, as discussed above, is focused on protecting the public and the environment from the hazards posed by nuclear waste. In addition to the characteristics of the waste itself, the risk that reprocessing waste poses to human health and the environment depends on the physical characteristics of the disposal facility and that facility's ability to safely isolate the waste from the human environment. Relevant characteristics of a disposal facility may include the depth of disposal, use of engineered barriers, and geologic, hydrologic, and geochemical features of the site. Taking these considerations into account, it is reasonable to interpret "sufficient concentrations" to mean concentrations of fission products in combination with long-lived radionuclides that would require disposal in a deep geologic repository.

Accordingly, under DOE's interpretation, solid waste that exceeds the NRC's Class C limits would be subject to detailed characterization and technical analysis of the radiological characteristics of the waste. This, combined with the physical characteristics of a specific disposal facility and the method of disposal, would determine whether the facility could meet its performance objectives, and if the waste can be disposed of safely. This approach would be governed by the waste characterization and analysis process and performance objectives for the disposal facility established by the applicable regulator, and thereby protective of human health and the environment.

The DOE interpretation does not require the removal of key radionuclides to the maximum extent that is technically and economically practical before DOE can define waste as non-HLW. Nothing in the statutory text of the AEA or the NWA requires that radionuclides be removed to the maximum extent technically and economically practical prior to determining whether waste is HLW. DOE has determined that the removal of radionuclides from waste that already meets existing legal and technical requirements for safe transportation and disposal is unnecessary and inefficient, and does not benefit human health or the environment. To the contrary, it potentially presents a greater risk to human health and the environment

because it prolongs the temporary storage of waste.

Therefore, under DOE's interpretation, waste resulting from the reprocessing of SNF is non-HLW if the waste:

- I. Does not exceed concentration limits for Class C low-level radioactive waste as set out in section 61.55 of title 10, Code of Federal Regulations; or
- II. Does not require disposal in a deep geologic repository and meets the performance objectives of a disposal facility as demonstrated through a performance assessment conducted in accordance with applicable regulatory requirements.

Reprocessing waste meeting either I or II of the above is non-HLW, and may be classified and disposed in accordance with its radiological characteristics in an appropriate facility provided all applicable requirements of the disposal facility are met.

C. Request for Comments

The Department specifically requests comments on its interpretation that reprocessing waste meeting either of the two criterion stated above is non-HLW. This Notice is intended to solicit public feedback on the DOE interpretation to better understand stakeholder perspectives prior to appropriate input and consultation with affected state and local regulators and any waste disposal classification decisions.

The Department will consider all comments received during the public comment period, and modify its proposed approach, as appropriate, based on public comment.

Signed at Washington, DC, on October 4, 2018.

Anne Marie White,
Assistant Secretary for Environmental Management.

[FR Doc. 2018-22002 Filed 10-9-18; 8:45 am]

BILLING CODE 6450-01--P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

Take notice that the Commission received the following electric corporate filings:

Docket Numbers: EC19-2-000.
Applicants: AL Sandersville, LLC, Effingham County Power, LLC, MPC Generating, LLC, Walton County Power, LLC, Washington County Power, LLC.
Description: Joint Application for Authorization Under Section 203 of the Federal Power Act, et al. of AL Sandersville, LLC, et al.

Filed Date: 10/3/18.

Accession Number: 20181003-5078.
Comments Due: 5 p.m. ET 10/24/18.

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER10-1521-004; ER10-1520-004; ER10-1522-003.

Applicants: Occidental Power Marketing, L.P., Occidental Power Services, Inc., Occidental Chemical Corporation.

Description: Second Supplement to June 29, 2018 Updated Market Power Analysis for the Central Region of the Occidental MBRA Entities.

Filed Date: 9/28/18.

Accession Number: 20180928-5171.
Comments Due: 5 p.m. ET 10/19/18.

Docket Numbers: ER17-2515-004.

Applicants: Chambers Cogeneration, Limited Partnership.

Description: Compliance filing; Settlement Compliance Filing to be effective 11/1/2017.

Filed Date: 10/1/18.

Accession Number: 20181001-5150.
Comments Due: 5 p.m. ET 10/22/18.

Docket Numbers: ER18-1424-001.

Applicants: Rio Bravo Fresno, A California Joint Venture.

Description: Report Filing; refund report 2018 to be effective N/A.

Filed Date: 10/2/18.

Accession Number: 20181002-5171.
Comments Due: 5 p.m. ET 10/23/18.

Docket Numbers: ER18-1427-001.

Applicants: Rio Bravo Rocklin, A California Joint Venture.

Description: Report Filing; refund report 2018 to be effective N/A.

Filed Date: 10/2/18.

Accession Number: 20181002-5174.
Comments Due: 5 p.m. ET 10/23/18.

Docket Numbers: ER18-2175-001.

Applicants: Mid-Atlantic Interstate Transmission, LLC, West Penn Power Company, The Potomac Edison Company, Monongahela Power Company, Trans-Allegheny Interstate Line Company, American Transmission Systems, Incorporated, PJM Interconnection, L.L.C.

Description: Tariff Amendment: MAIT et al submit Supplement in ER18-2175-000 re: IAS, SA Nos 2149 and 3743 to be effective 10/5/2018.

Filed Date: 10/3/18.

Accession Number: 20181003-5013.
Comments Due: 5 p.m. ET 10/24/18.

Docket Numbers: ER18-2426-001.

Applicants: The Potomac Edison Company, PJM Interconnection, L.L.C.

Description: Tariff Amendment: Potomac submits Supplemental Filing in ER18-2426-000 re: IA SA No. 4452 to be effective 11/13/2018.



*A U.S. Department of Energy
Site-Specific Advisory Board*

NNMCAB

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Jacob Griego
Student Representative
Jenessa Trujillo
Student Representative
Lanz Sanchez
Student Representative

May 24, 2018

Mr. Doug Hintze, Manager
Environmental Management Los Alamos Field Office
3747 West Jemez Road, MS A316
Los Alamos, NM 87544

Dear Mr. Hintze,

I am pleased to enclose Recommendation 2018-02 "Recommendation Regarding the Energy Communities Alliance Report on Waste Disposition," which was unanimously approved by the Northern New Mexico Citizens' Advisory Board during its meeting on May 23, 2018.

Please contact me if you have questions regarding this recommendation. We look forward to the response from the Department of Energy.

Sincerely,

Gerard Martinez y Valencia
Chair, NNMCAB

Enclosure: a/s

Cc w/encl:

U. S. Senator Tom Udall
U. S. Senator Martin Heinrich
U. S. Congressman Ben R. Lujan
Secretary Butch Tongate, NMED
David Borak, DFO (via e-mail)
M. Lee Bishop, DDFO (via e-mail)
David Rhodes, EM-LA (via e-mail)
Gil L. Vigil, Executive Director Eight Northern Indian Pueblos
Menice B. Santistevan, NNMCAB Executive Director
NNMCAB File

Northern New Mexico Citizens' Advisory Board
94 Cities of Gold Road
Santa Fe, NM 87506
Phone: 505-989-1662 Fax: 505-989-1752
1-800-218-5942

www.energy.gov/em/nnmcab

NORTHERN NEW MEXICO CITIZENS' ADVISORY BOARD

Recommendation to the Department of Energy

No. 2018-02

Recommendation Regarding the Energy Community Alliance Report on Waste Disposition

Drafted by: Dr. Stanley Riveles

Background

The Energy Communities Alliance (ECA) sponsored the wide-ranging report "Waste Management: A New Approach to DOE's Waste Management Must be Pursued." The NNMCAB was invited to review its recommendations. These recommendations would, if implemented, bring about major changes in longstanding national policies regulating the categorization, treatment, and disposition of DOE legacy radioactive waste. The environmental management of such wastes would henceforth be based, not on origin, but on the radioactive characteristics of the waste and the resulting risks to human health and to the environment. (Presumptively, such changes could also impact the disposition of NNSA waste.)

Far-reaching in its potential impact on national policy, the report affects, but goes well beyond the purview of the NNMCAB. At the same time, the recommendations would have major implications for New Mexico, both positive and negative. Though not directly referenced in the report, LANL/EM practices would be significantly affected. However, the Waste Isolation Pilot Project (WIPP) gets a lot of attention. It would receive different (re-categorized) and larger volumes of waste. It is envisioned that WIPP would benefit from greater capital investment, resulting in more jobs and greater economic activity in the region. The larger waste (and more frequent) volumes brought to WIPP from locations throughout the U.S. could raise risks to both health and environment and further burden the transportation network in New Mexico.

The report underlines the urgency of pursuing a new approach. According to figures cited in the report, DOE's overall environmental waste liability has more than doubled to \$372 billion over the past 20 years, of which EM's portion has grown over \$90 billion from \$163 billion to \$257 billion. Reducing the lifecycle costs of these radioactive wastes and the burden on local communities requires a new decision approach based on risk management.

Comments and Observations

The systemic problems of the DOE/EM program identified by the ECA report are clear and compelling. The present classification waste based on origin, rather than risk goes back to the beginnings of the nuclear weapons program. The economics of the program are currently unsustainable—somewhat akin to making the minimum payment on a growing credit card balance. The current classification categories in DOE Order 435.1 (Radioactive Waste Management) do not align with NRC domestic or IAEA international standards. In principle, transition to a risk management approach would result in less "over-classification" of waste and reduce the volume of wastes subject to higher levels of handling. According to the ECA report, costs would be significantly reduced—estimated at \$2.5 million per day.

The ECA report itself is based on much prior research dealing with the same problem. The ECA is composed of representatives of local communities hosting DOE facilities and thus has a degree of local "buy-in." Furthermore, the report ostensibly has the support of the Waste Management industry, as evidenced by remarks by industry leaders at the 2018 Waste Management Conference in Phoenix.

However, while the report presents a coherent and consistent argument on behalf of a new approach, it would be difficult to determine the merits based on this policy study alone. The lack of empirical data is a significant drawback. There are no charts or figures in the study. The “new” system of classifying waste is not defined either in general terms or specific levels of radioactivity. Methods for determining or calculating the conversion of existing to new classes of waste are not presented. Global figures for total amounts of waste and total costs are presented narratively. But it is not possible to evaluate the differential impact by DOE facility or State. The WIPP facility plays a prominent role in the proposed solution as the recipient of significantly increased volumes and types of waste. But the specific amounts are not explained. WIPP is also expected to receive increased capital expenditures for expansion, but specific numbers are not provided. Information on the notional return on investment is not provided (except the vague estimate of \$2.5 million per day mentioned above). On the whole, the merits are asserted but not really evaluated or empirically justified.

The ECA Report sets forth policy changes to advance desirable and widely-accepted goals of cleaning up nuclear wastes nationally and in New Mexico. At the same time, New Mexico plays an important role in the solution. But given the empirical shortcomings, the report should be regarded, at this juncture, as a worthwhile, but preliminary policy study. A pro or con recommendation on the merits of the proposal is not possible at this time.

Recommendations

1. The NNM CAB recommends that DOE/EM undertake a comprehensive analysis of the ECA report, including technical, financial, environmental, safety, transportation, and other implications of implementing its recommendations. This is for the purpose of evaluating the impact of such changes.
2. The NNM CAB recommends that DOE/EM evaluates the site-specific impact of implementing the recommended changes in New Mexico, specifically including LANL and WIPP, including both potential risks and benefits.
3. In undertaking its evaluation, The NNM CAB recommends that DOE/EM address the types of questions developed by the NNM CAB set forth in the attachment.
4. The NNM CAB recommends that DOE/EM provide a realistic deadline for performing the analysis and brief its results on an ongoing basis to the NNM CAB and New Mexico environmental authorities for comment and input.

Intent

It is the intent of the NNM CAB to remain seized of this issue to order to promote completion of clean-up programs at LANL and effective use of WIPP and to assure the availability of adequate resources to pursue both goals.

References

1. *“Waste Disposition: A New Approach to DOE’s Waste Management Must Be Pursued,”* Energy Communities Alliance, September 2017.
<https://static1.squarespace.com/static/55c4c892e4b0d1ec35bc5efb/t/59ce7384cd39c3b12b97f988/1506702214356/ECA+Waste+Disposition+Report.pdf>

Attachment
Relevant Questions Concerning the ECA Report

Technical

- What would the “risk” based classification look like?
- Are there precedents for such a classification?
- Would it replace or complement existing DOE classification system?
- If risk is substituted for origin, what would be the technical definitions, based on what criteria?
- Do changes require new federal legislative action? If by regulation, could the changes be challenged in court?
- Would regulations regarding exposure to radioactivity for workers and the public need to be changed, if waste is recategorized?

Materials

- How much waste would be removed from the HLW category under new definition?
- How would volumetric changes be determined, on average or by individual containers?
- How much of new TRU & LLW derive from liquid waste?
- How would TRU and LLW currently comingled with HLW be separated?
- How much would be potentially directed to WIPP?
- Would container volumes currently stored at WIPP be recalculated.
- Provide charts/graphs showing quantities currently classified and quantities following classification.

WIPP

- What is current WIPP capacity limit? What would be new limit if container contents were recalculated?
- Is this a manual or algorithmic recalculation?
- What legal changes would be required? Do changes require action by NM legislature?
- What burdens does WIPP expansion impose on NM? Transportation and transportation safety, personal exposure, traffic, roads, environmental?
- How would those burdens be mitigated?
- If WIPP is expanded, what benefit does that provide to NM in terms of investment and jobs?

Cost/Benefit

- What is the economic impact of the changes?
- What is the return on investment?
- What is the cost/benefit impact for facilities in New Mexico, and how are they calculated?

**NNMCAB MEETING SCHEDULE
2019**

January 30

1:00 p.m. to 5:15 p.m. Board Meeting

Ohkay Conference Center

68 New Mexico 291
San Juan, NM 87566

February 20

11:45 to 12:45—Executive Committee Meeting

1:00 to 4:00—Combined Committee Meeting

NNMCAB Office

March 13

1:00 p.m. to 5:15 p.m. Board Meeting

UNM Los Alamos

4000 University Drive
Los Alamos, NM 87544

April 24

LANL Tour

Bradbury Museum

1350 Central Ave.
Los Alamos, NM 87544

? ~~May 8~~ MAY 1 ?

1:00 p.m. to 5:15 p.m. Board Meeting

Ohkay Conference Center

68 New Mexico 291
San Juan, NM 87566

June 19

11:45 to 12:45—Executive Committee Meeting

1:00 to 4:00—Combined Committee Meeting

NNMCAB Office

July 24

1:00 p.m. to 5:15 p.m. Board Meeting

El Monte Sagrado

317 Kit Carson Road
Taos, NM 87571

August 28

11:45 to 12:45—Executive Committee Meeting

1:00 to 4:00—Combined Committee Meeting

NNMCAB Office

September 25

1:00 p.m. to 5:15 p.m. Board Meeting

New Mexico Highlands University

Campus Student Union Building

800 National Avenue
Las Vegas, NM 87701

October 23

LANL Tour (RDX)

Bradbury Museum

1350 Central Ave.
Los Alamos, NM 87544

November 20

1:00 p.m. to 5:15 p.m. Board Meeting

The Lodge at Santa Fe

750 N. St. Francis Dr.
Santa Fe, NM 87501

Cancer in Northern New Mexico

Epidemiological Data for Cancer Rates Downstream of LANL

Northern New Mexico Citizens' Advisory Board Meeting
The Lodge at Santa Fe

November 7, 2018

Angela Meisner, M.P.H.
Epidemiologist



HEALTH SCIENCES
NEW MEXICO TUMOR REGISTRY

What We'll Cover Today

- Cancer
- Public Health Surveillance for Cancer
- Measures and Methods
- Cancer Rates in Northern New Mexico
- Questions
- Concluding Remarks

Cancer

- The word ***cancer*** is commonly used to refer to over 100 different diseases that may share common characteristics or “hallmarks”
- Each type of cancer is associated with ***risk factors*** that influence the chances of developing the disease... but these factors are not the same for all types of cancer
- Methods of treatment often vary by type of cancer
- Among children born in the United States today, it is estimated that 1-in-3 females and 1-in-2 males will be diagnosed with cancer in their lifetime

**10 Leading Causes of Death by Sex, New Mexico, 2016
and U.S. 2015 (Ranked by number of NM deaths)**

	New Mexico	United States
1	Heart Disease	Heart Disease
2	Cancer (Malignant)	Cancer (Malignant)
3	Unintentional injuries	Chronic Lower Respiratory Diseases
4	Chronic Lower Respiratory Diseases	Unintentional injuries
5	Stroke	Stroke
6	Diabetes Mellitus	Alzheimer's Disease
7	Alzheimer's Disease	Diabetes Mellitus
8	Chronic Liver Disease and Cirrhosis	Influenza and Pneumonia
9	Suicide	Kidney Disease
10	Influenza and Pneumonia	Suicide

SOURCE: New Mexico Department of Health

In 2018, an estimated 9,730 New Mexicans will be newly diagnosed with cancer, and approximately 3,750 deaths from cancer will occur.

SOURCE: American Cancer Society

Public Health Surveillance

Definition of Cancer Surveillance

The systematic collection
of information on cancer

- *and* -

Timely and effective use of such information
for the purposes of cancer prevention and control

Public Health Surveillance

Reportable Diseases and Conditions

- Considered a risk to the public health
- Monitored to assist in prevention and control
- Designated and enforced by state government
- Funded and administered by local, state, and federal agencies

Public Health Surveillance

Reportable Diseases and Conditions

- Cancer is a reportable disease in New Mexico
- Collection of cancer data is mandated under state law (New Mexico Administrative Code: Title 7; Chapter 4; Part 3)
- NMTR is the NM Department of Health's Designee for conducting Public Health Surveillance for Cancer

Public Health Surveillance

Health Insurance Portability and Accountability Act (HIPAA)

- Public Health Surveillance is allowed under HIPAA
 - § 164.512 Uses and disclosures for which consent, an authorization or opportunity to agree or object is not required
- NMTR is excluded from the UNM-HSC HIPAA Hybrid Covered Entity

“A covered entity may use or disclose protected health information to the extent that such use or disclosure is required by law and the use or disclosure complies with and is limited to the relevant requirements of such law.”

Cancer Surveillance in New Mexico

New Mexico Tumor Registry

- Population-based, central cancer registry
- Established in 1966
- Area of Coverage:

- New Mexico Statewide
 - Arizona American Indians
 - ...in collaboration with the Arizona Cancer Registry



- Founding member of the National Cancer Institute's SEER Program (1973)
- Collect and provide high quality cancer surveillance data to support scientific research and a broad spectrum of cancer control activities

Cancer Surveillance in New Mexico

New Mexico Tumor Registry

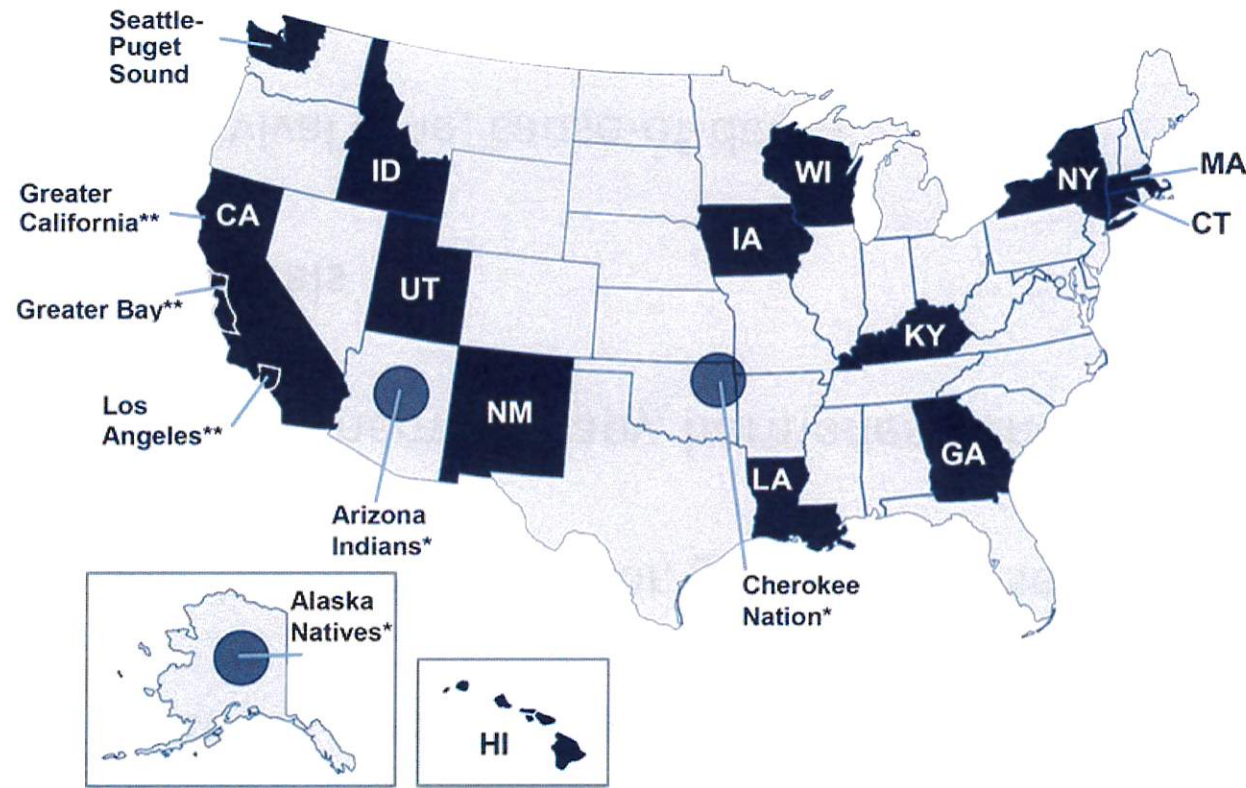
Cancer surveillance in New Mexico is conducted in accordance with standards set by:

- Surveillance, Epidemiology and End Results Program
- Centers for Disease Control and Prevention
- North American Association of Central Cancer Registries
- American College of Surgeons



NATIONAL CANCER INSTITUTE

Surveillance, Epidemiology, and End Results Program



*Subcontract under New Mexico

**Three regions represent the state of California: Greater Bay, Los Angeles, and Greater California

The SEER Program provides information on cancer statistics in an effort to reduce the cancer burden among the U.S. population. SEER is supported by the Surveillance Research Program in National Cancer Institute's Division of Cancer Control and Population Sciences. This is the funding agency of the NMTR.

The New Mexico Tumor Registry documents a variety of characteristics for each cancer case

Patient

- Personal identifiers, sex, ancestry, age, place of residence

Cancer

- Anatomic site, histology, behavior, grade, stage, selected markers

Therapy

- Surgery, radiation, chemotherapy, hormones, other modalities

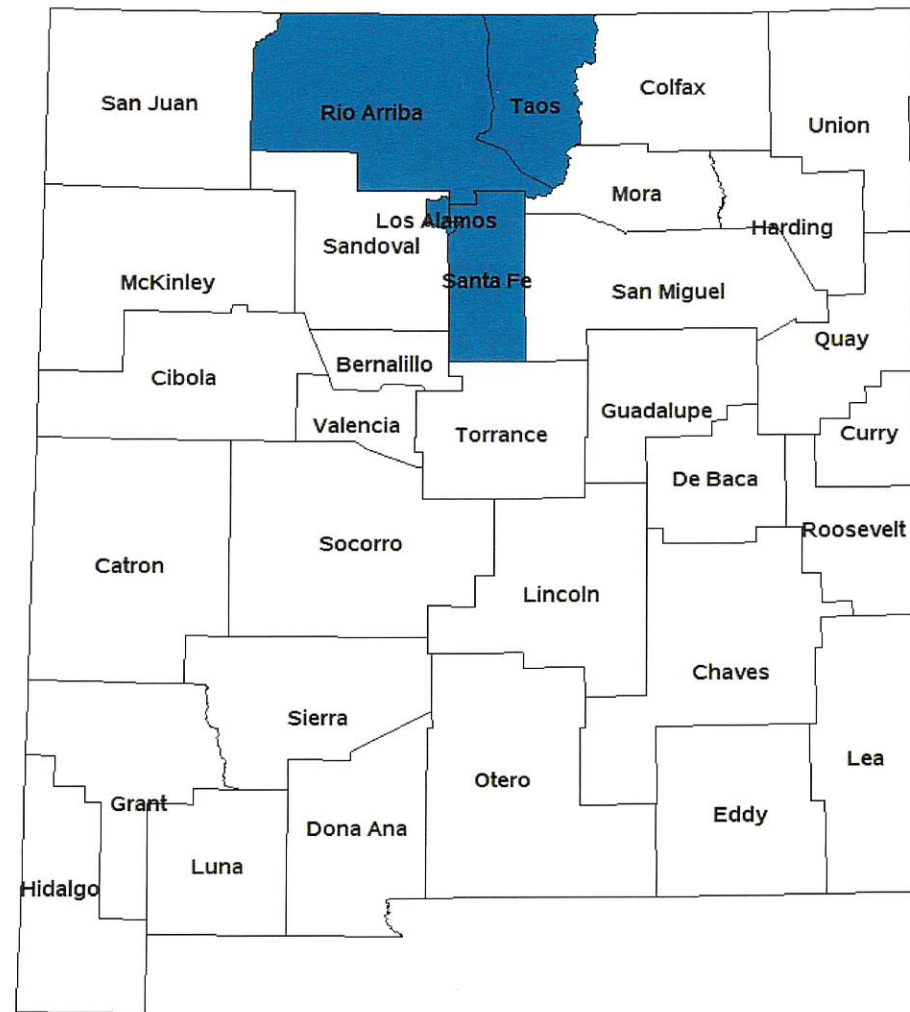
Care Provider

- Physicians, hospitals

Outcome

- Vital status, survival time, cause-of-death

Focus on Four Northern New Mexico Counties

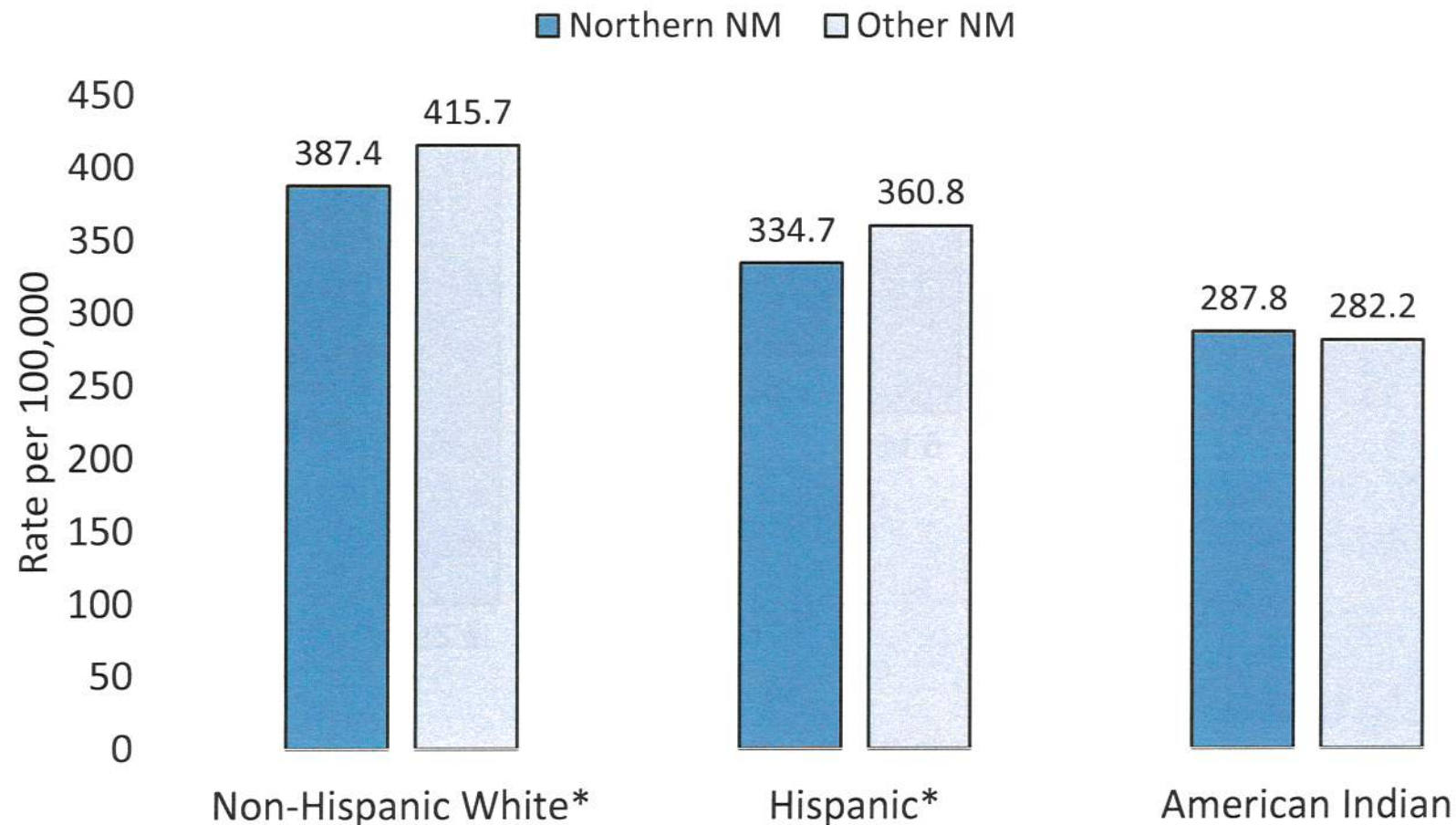


Incidence Rates

- ***Incidence rates*** measure of how quickly new cancer cases are being diagnosed among New Mexico residents
- Relates newly-diagnosed cancer cases to the size of the resident population during a specified time period
- Today's presentation focuses on average annual incidence rates for the time period 2005-2016
- All rates were age-adjusted to the distribution of the US 2000 population
- The role of chance was assessed with conventional methods for assessing "statistical significance"

All Types of Cancer - Combined

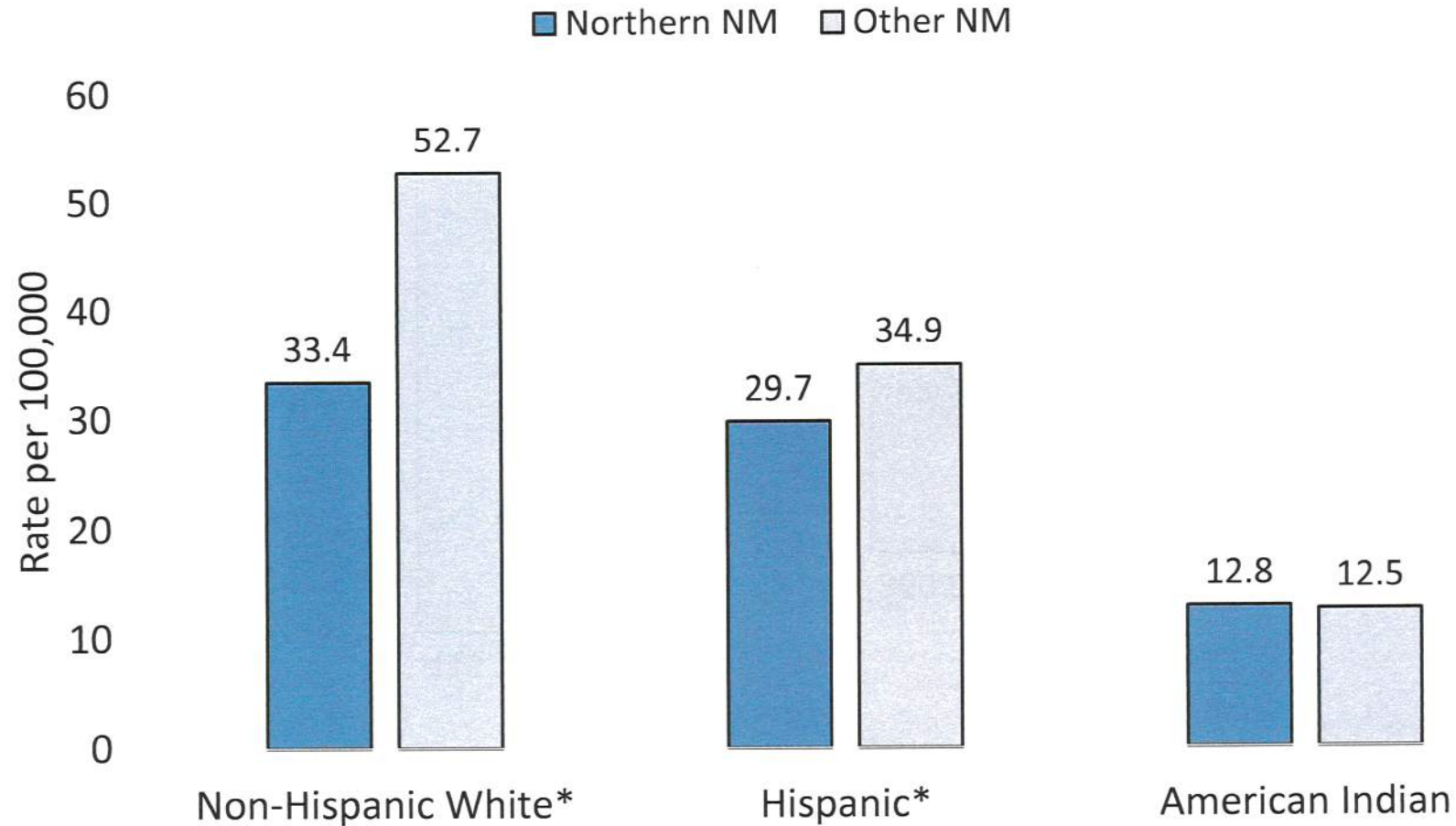
Average Annual Age-Adjusted Incidence Rates, 2005-2016



* Asterisk denotes statistically significant difference ($p < 0.05$)

Cancers of the Lung and Bronchus

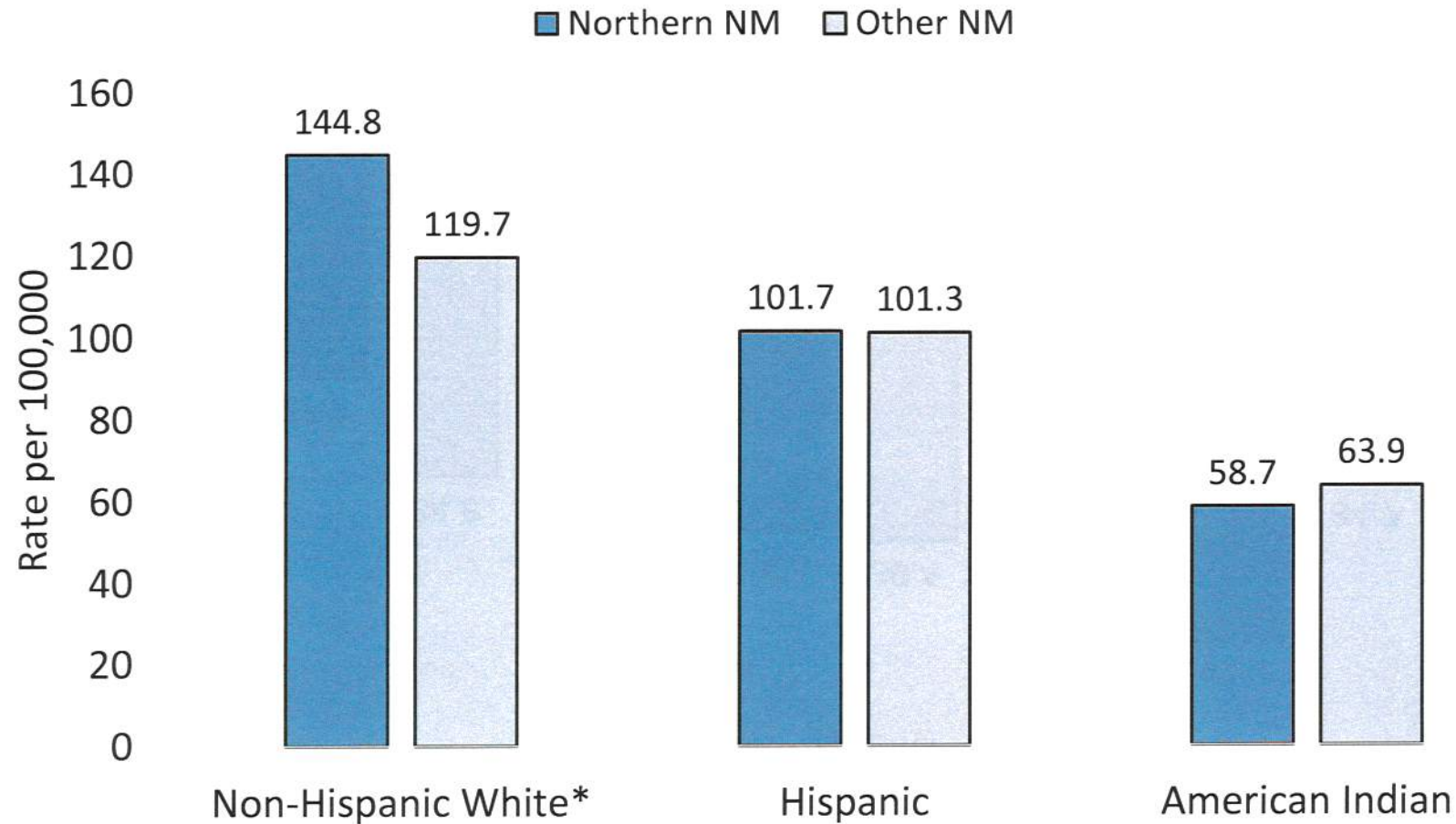
Average Annual Age-Adjusted Incidence Rates, 2006-2015



* Asterisk denotes statistically significant difference ($p < 0.05$)

Cancers of the Female Breast

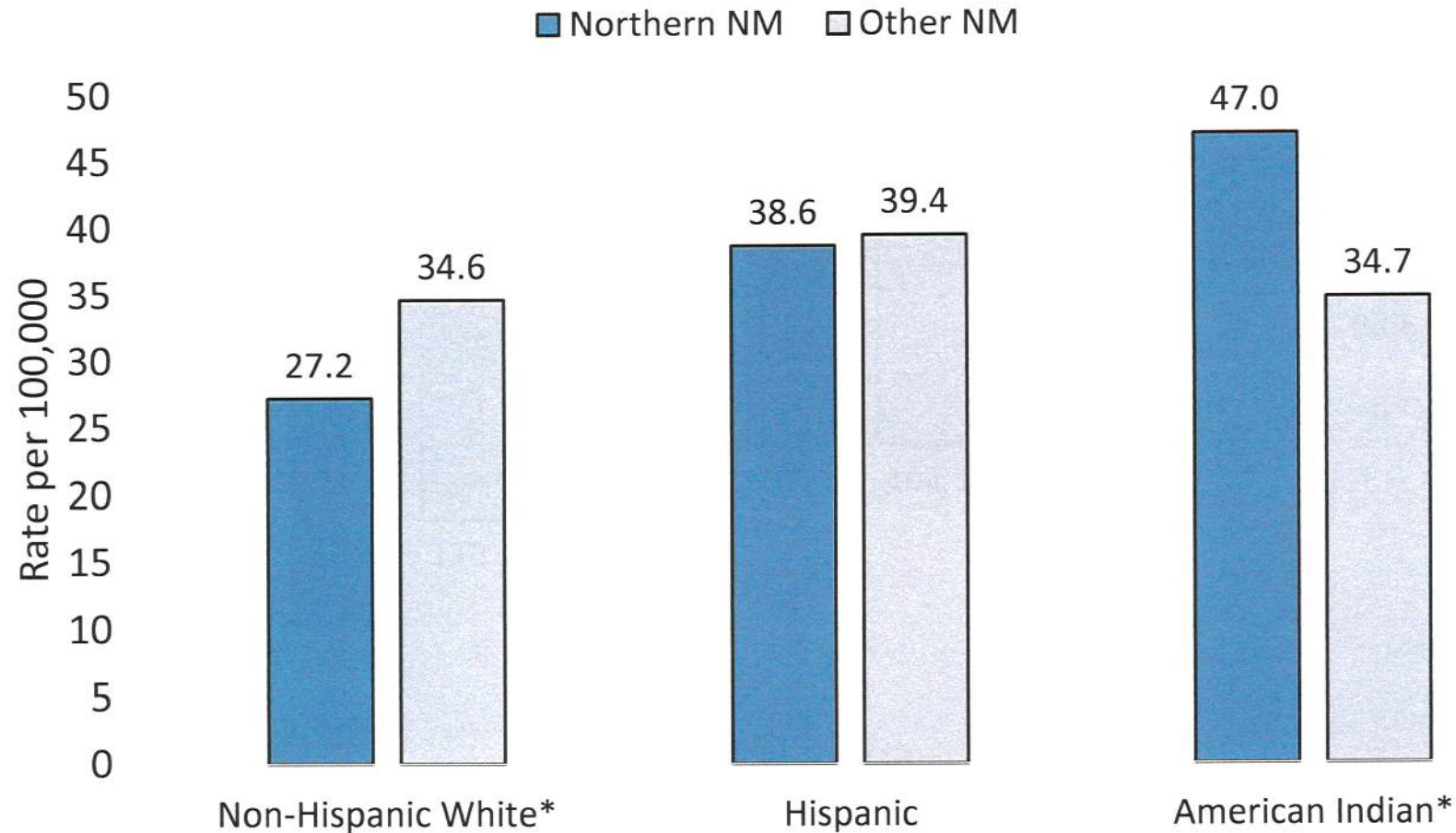
Average Annual Age-Adjusted Incidence Rates, 2006-2015



* Asterisk denotes statistically significant difference ($p < 0.05$)

Cancers of the Colon and Rectum

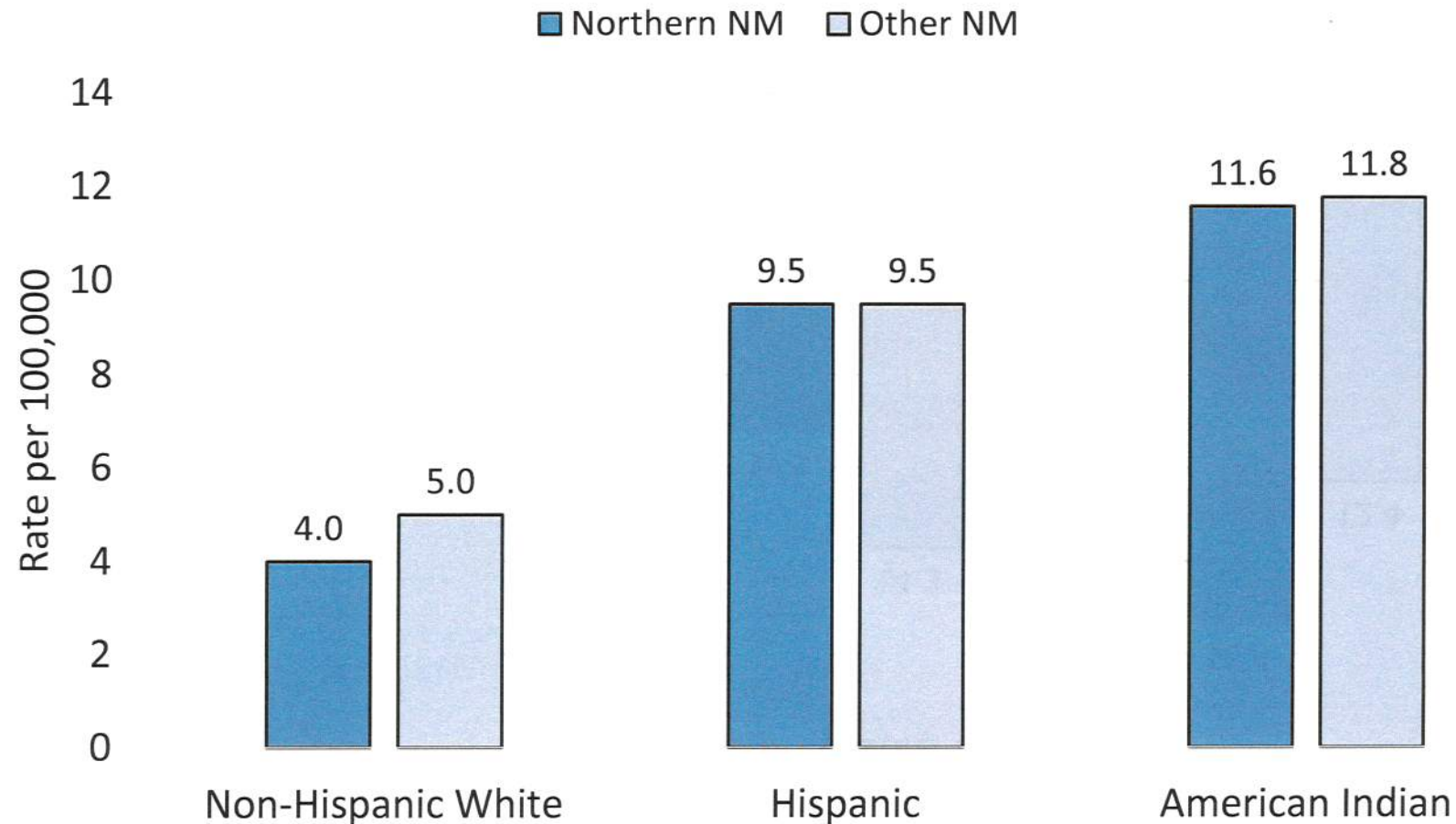
Average Annual Age-Adjusted Incidence Rates, 2006-2015



* Asterisk denotes statistically significant difference ($p < 0.05$)

Cancers of the Stomach

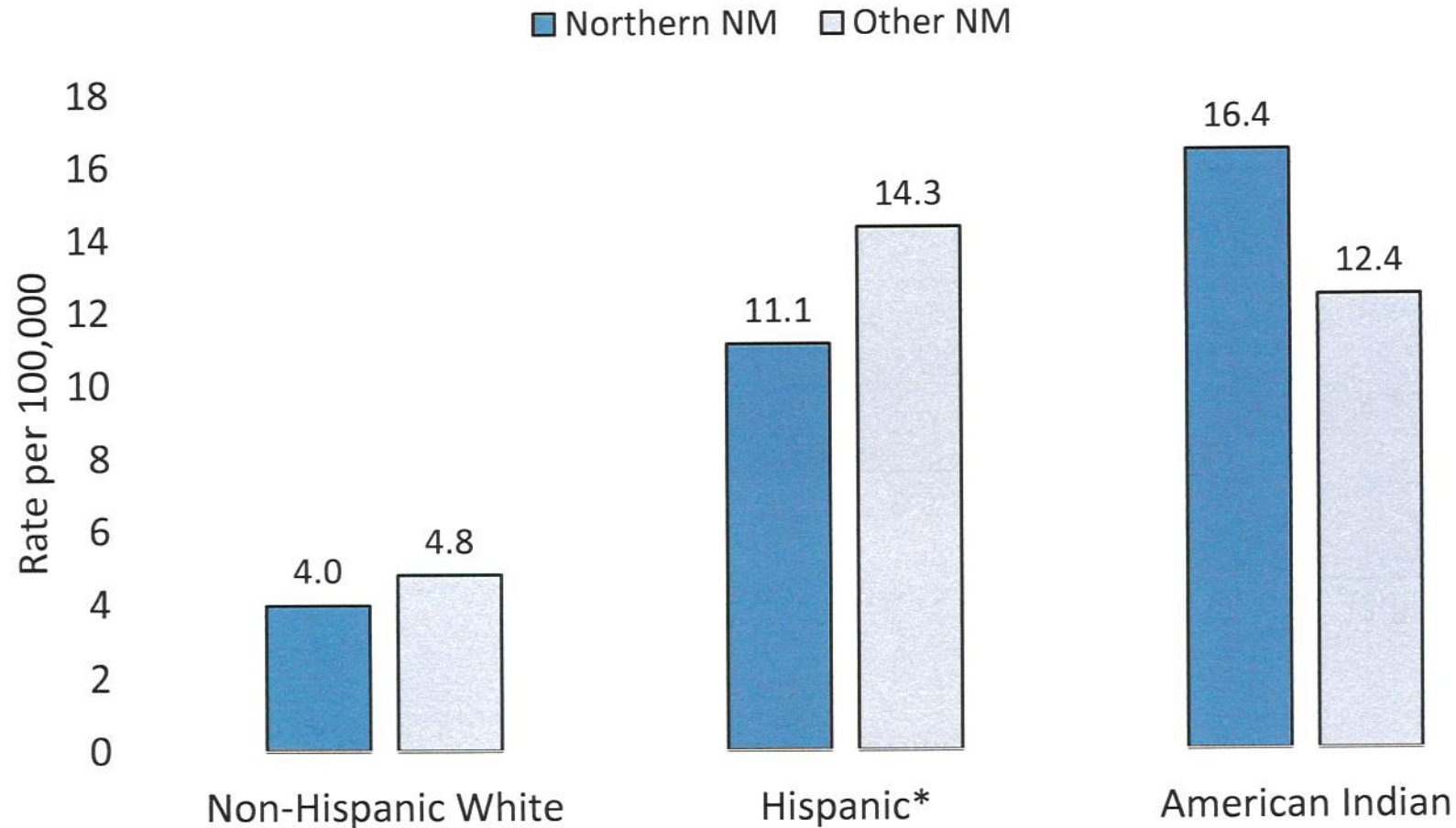
Average Annual Age-Adjusted Incidence Rates, 2006-2015



No statistically significant differences observed

Cancers of the Liver

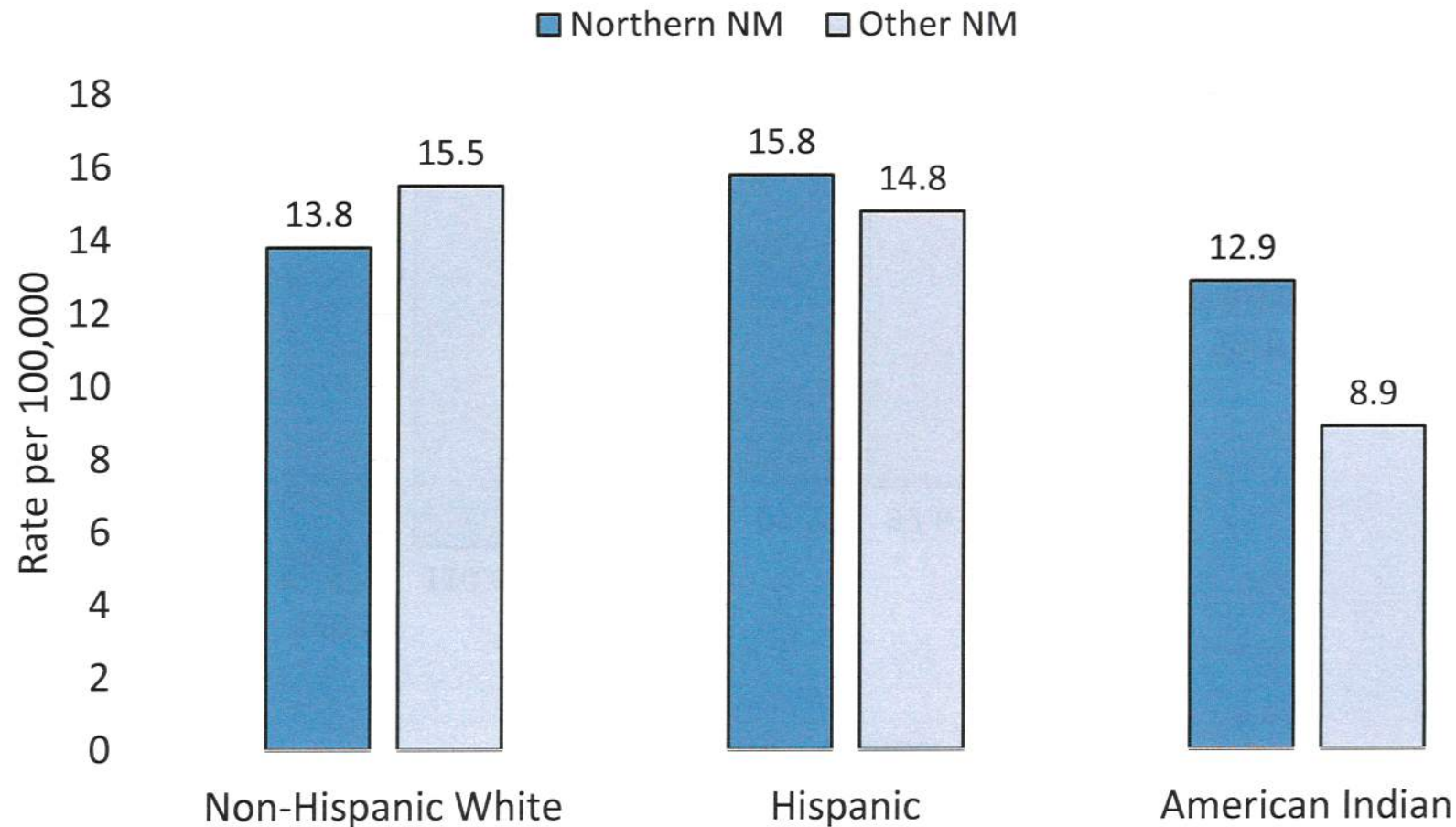
Average Annual Age-Adjusted Incidence Rates, 2006-2015



* Asterisk denotes statistically significant difference (p<0.05)

Cancers of the Thyroid

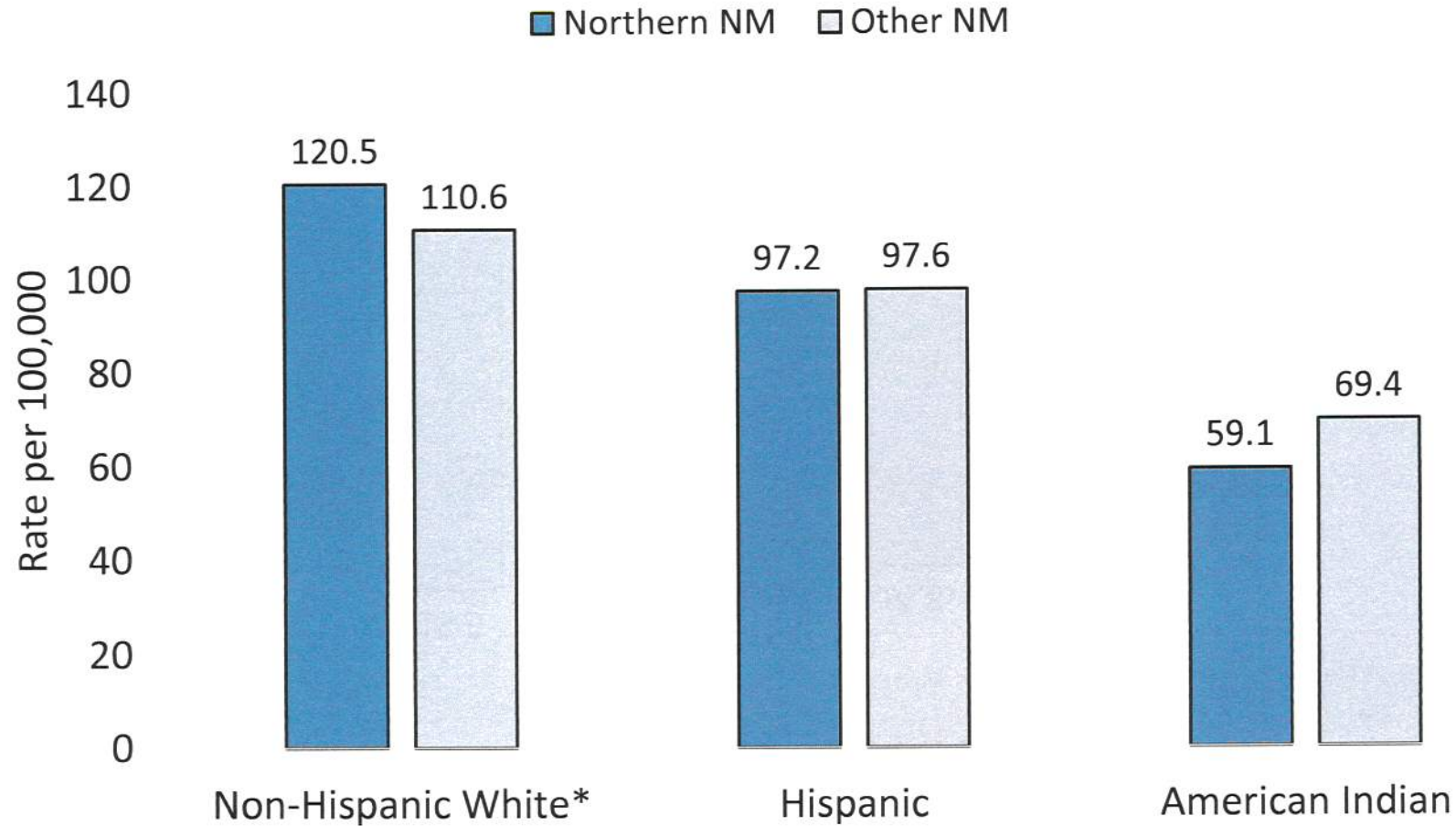
Average Annual Age-Adjusted Incidence Rates, 2006-2015



No statistically significant differences observed

Cancers of the Prostate

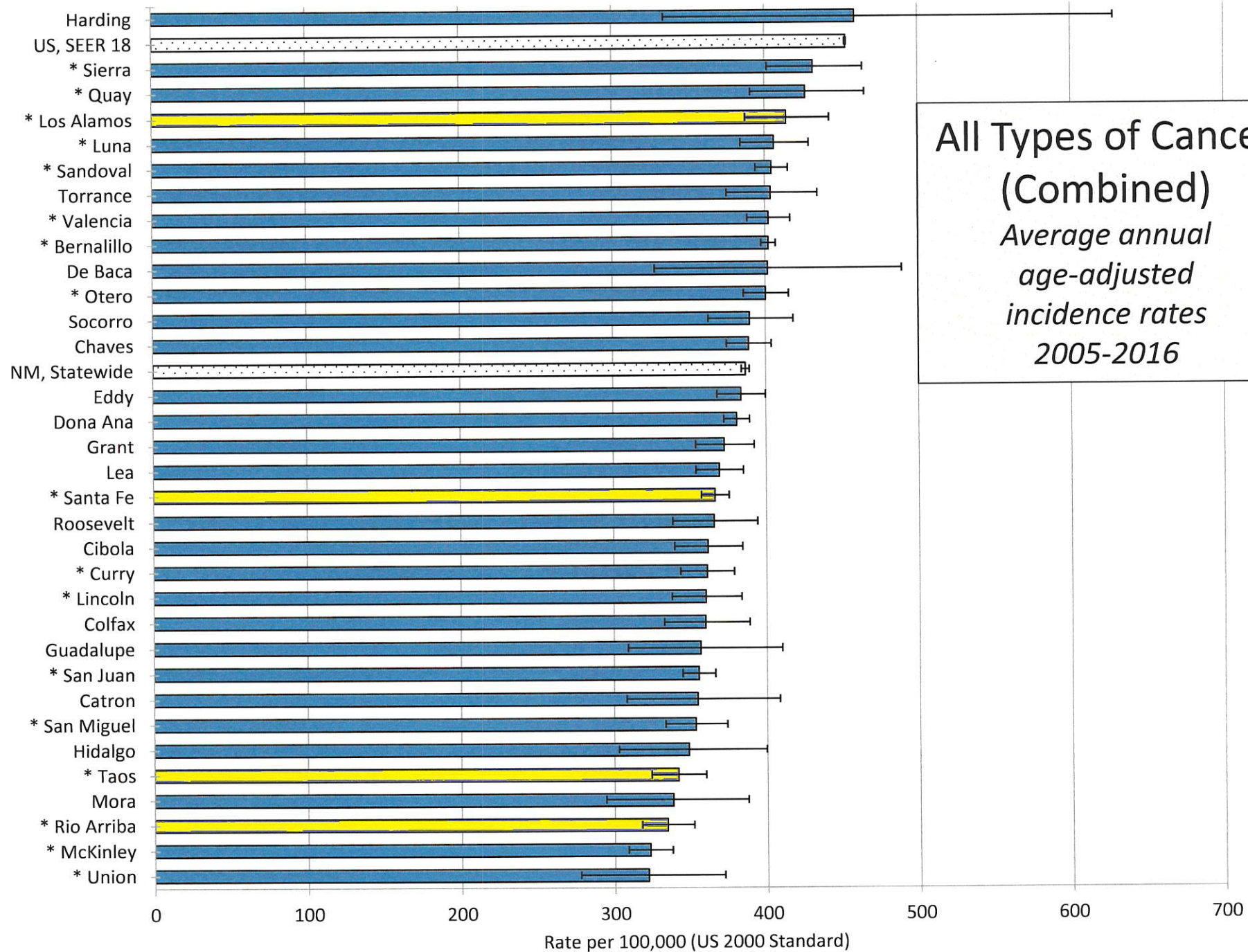
Average Annual Age-Adjusted Incidence Rates, 2006-2015



* Asterisk denotes statistically significant difference ($p < 0.05$)

Concluding Remarks

- Cancer is a leading cause of illness and death in New Mexico
- Cancer rates vary by race/ethnicity
- With some exceptions, cancer rates in Northern New Mexico are generally similar to rates observed in other regions of the state
- Challenges:
 - *Constraints in compiling and interpreting reports based on a relatively small number of cases in some areas*
 - *Appropriate population estimates are not always readily available for such analyses*



Any Questions?

Thank you!

Chuck Wiggins, Ph.D.

Director

Email: cwiggins@salud.unm.edu

Phone: 505-272-3127

Angela Meisner, M.P.H.

Epidemiologist

Email: awmeisner@salud.unm.edu

Phone: 505-272-2422





U.S. DEPARTMENT OF
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Environmental Management Los Alamos Field Office

Program Overview and Update

November 2018



ENVIRONMENTAL MANAGEMENT
SAFETY ♦ PERFORMANCE ♦ CLEANUP ♦ CLOSURE

Steve Hoffman
Deputy Manager
Environmental Management Los Alamos Field Office
November 7, 2018

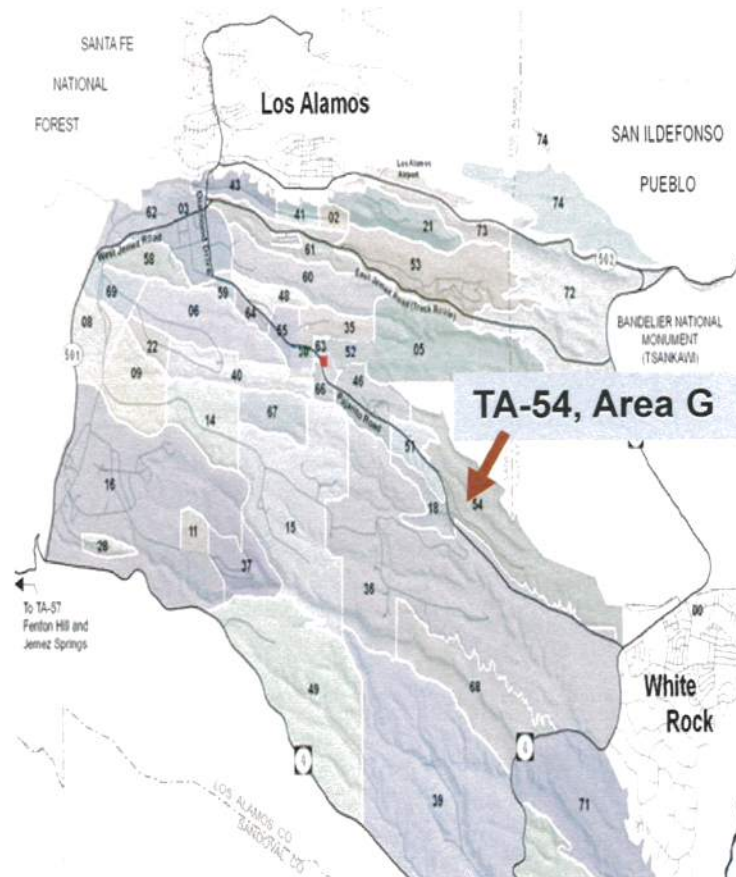


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EM-LA Mission at Los Alamos National Laboratory

- ❑ The EM-LA mission is to safely, efficiently, and with full transparency complete the cleanup of legacy contamination and waste (pre-1999) resulting from nuclear weapons development and government-sponsored nuclear research.
 - Legacy cleanup of soil & groundwater across the laboratory
 - Legacy waste is primarily in Area G located at Technical Area 54 (TA-54)



Los Alamos National Laboratory



ENVIRONMENTAL MANAGEMENT
SAFETY ♦ PERFORMANCE ♦ CLEANUP ♦ CLOSURE

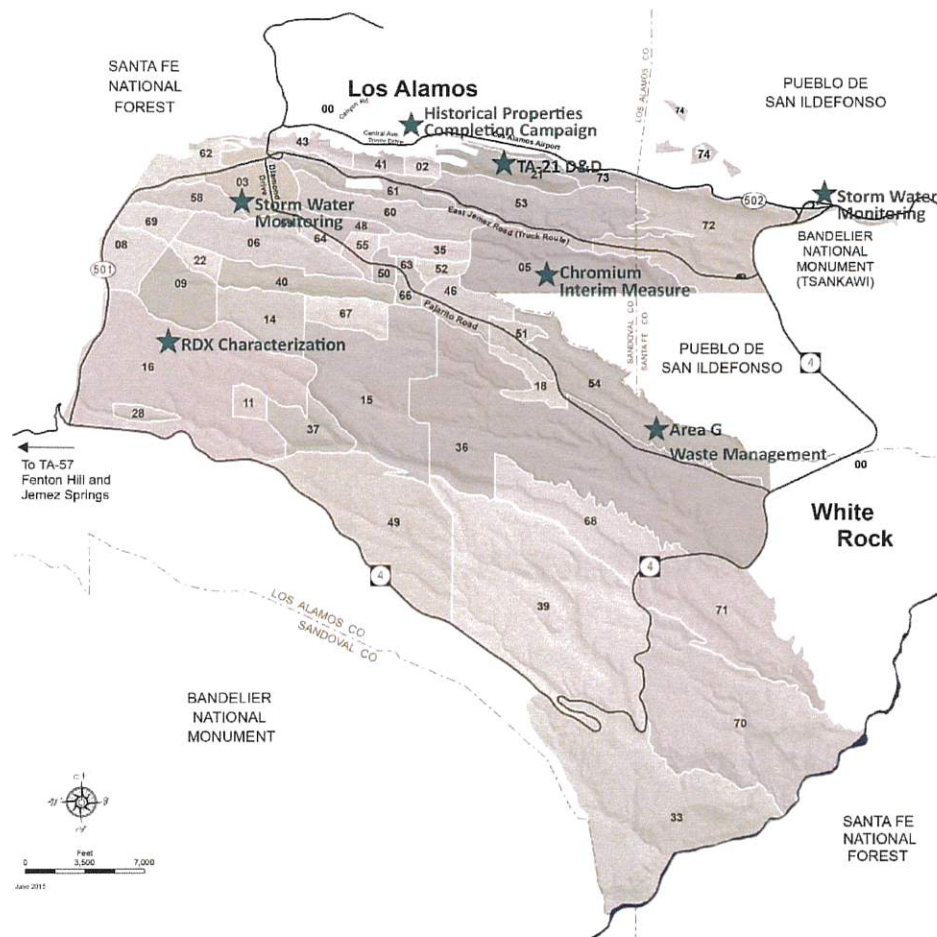


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Key Environmental Management Cleanup and Waste Management Sites at Los Alamos National Laboratory



Overview of EM's Legacy Cleanup and
Legacy Waste Management at LANL



ENVIRONMENTAL MANAGEMENT
SAFETY ♦ PERFORMANCE ♦ CLEANUP ♦ CLOSURE



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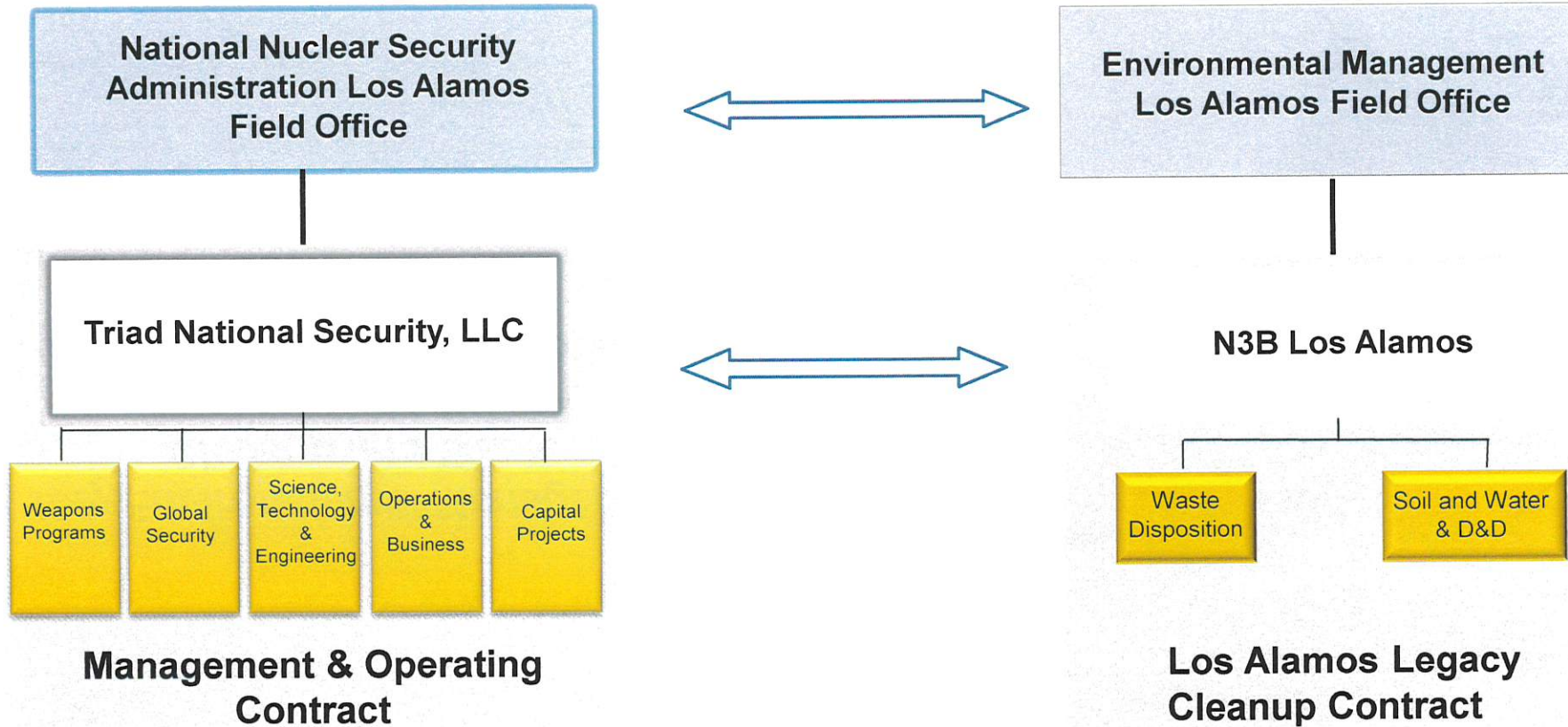




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Los Alamos National Laboratory Organizational Structure



ENVIRONMENTAL MANAGEMENT
SAFETY ♦ PERFORMANCE ♦ CLEANUP ♦ CLOSURE



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Campaign Approach

- ☐ **EM-LA Lifecycle Cost Estimate (LCE) is based on a campaign approach**
 - LCE is integrated with the 2016 Consent Order
 - 17 Soil and water campaigns identified
 - Legacy waste is a stand alone campaign
- ☐ **As one campaign completes, the next scheduled campaign commences**
- ☐ **Multiple campaigns underway simultaneously**
- ☐ **Safe, efficient and transparent execution**



ENVIRONMENTAL MANAGEMENT
SAFETY ♦ PERFORMANCE ♦ CLEANUP ♦ CLOSURE



Consent Order Campaigns

Item #	Campaign Title	SWMUs/AOCs	Estimated Completion	Estimated Cost (M)
1	Chromium Interim Measure	1	2020 – 2022	\$38.9 - \$50.6
2	Historical Properties Completion	84	2019 – 2020	\$5.3 - \$6.4
3	Royal Demolition Explosives (RDX) Characterization	2	2022 – 2024	\$1.6 - \$2.1
4	Supplemental Investigations Reports	222	2019 – 2019	\$0 - \$1.0
5	TA-21 D&D and Cleanup	41	2020 – 2022	\$45.8 - \$54.9
6	RDX Remedy	0	2024 – 2025	\$22.3 - \$26.8
7	Known Cleanup Sites	20	2027 - 2028	\$34.8 - \$41.8
8	Material Disposal Area (MDAs) A & T Remedy	30	2028 – 2031	\$92.1 - \$124.3
9	Chromium Final Remedy	0	2026 – 2028	\$100.3 - \$130.0
10	Southern External Boundary	60	2025 – 2026	\$10.0 - \$12.0
11	MDA C Remedy	1	2024 – 2026	\$34.6 - \$48.7
12	Sandia Canyon Watershed	49	2024 – 2025	\$6.3 - \$7.6
13	Pajarito Watershed	167	2028 – 2030	\$20.7 - \$24.9
14	Upper Water Watershed	253	2030 – 2031	\$33.5 - \$40.2
15	MDA AB Remedy	12	2027 – 2030	\$41.8 - \$50.2
16	MDA H Remedy	1	2029 – 2030	\$15.3 - \$18.3
17	MDA G & L Remedy / D&D	12	2035 – 2040	\$237.9 - \$356.9
Highlighted rows indicate campaigns currently underway				





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MANAGEMENT**

Consent Order FY 2018 Enforceable Milestones

Campaign	Consent Order Milestone	Target Date	Forecast	Actual (M/NM)
Chromium IM & Characterization	Technical Report Package for Chromium Plume Center Characteristics	Mar 30, 2018	Mar 28, 2018	Met
Chromium IM & Characterization	Letter Report to NMED-HWB documenting integrated operation of Chromium Extraction Well 4 (CrEX-4) into the existing IM System	Mar 30, 2018	Mar 22, 2018	Met
Chromium IM & Characterization	Summary Report (Completion or Progress) Phase I Pilot Amendment Test Results	Jul 31, 2018	Jul 31, 2018	Met
Chromium IM & Characterization	Phase II Pilot Amendment Test Work Plan	Sep 28, 2018	Sep 28, 2018	Met
Chromium IM & Characterization	Annual Progress Report on Chromium Plume Control IM Performance	Sep 28, 2018	Sep 28, 2018	Met
RDX Characterization	Technical Report Package related to Deep Groundwater Investigation	Mar 30, 2018	Mar 30, 2018	Met
RDX Characterization	R-69 Field Completion	Sep 28, 2018	Sep 28, 2018	Renegotiated
RDX Characterization	First Annual Long-Term Monitoring Report following completion of Surface CMI and approval of Long-Term Monitoring Plan	Sep 28, 2018	Sep 28, 2018	Met



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Consent Order FY 2018 Enforceable Milestones (continued)

Campaign	Consent Order Milestone	Target Date	Forecast	Actual (M/NM)
Historical Properties Upper LA Canyon	Upper LA Canyon Phase II IR Submitted to NMED	Sept 28, 2018	Sept 28, 2018	Met
Historical Properties Middle LA Canyon	Middle LA Canyon Phase II IR Submitted to NMED	Sept 28, 2018	Sept 28, 2018	Met
TA-21 D&D and Cleanup	Investigation Report for DP sites Aggregate Area at DP East at TA-21	Jun 29, 2018	Jun 29, 2018	Met
Known Cleanup Sites	Field Completion for Aggregate Area Known Cleanup Sites	Sep 28, 2018	Sep 28, 2018	Met
Sandia Canyon Watershed	Sandia Canyon Wetland Performance Report for Period April 2017-December 2017	Apr 30, 2018	Apr 30, 2018	Met
N/A	Annual Monitoring Report for the completed FY17 and Plan for the upcoming FY18 LA/Pueblo Watershed Sediment Transport Mitigation Project	Apr 30, 2018	Apr 28, 2018	Met
N/A	Annual Update to the Interim Facility-Wide Groundwater Monitoring Plan	May 30, 2018	May 30, 2018	Met



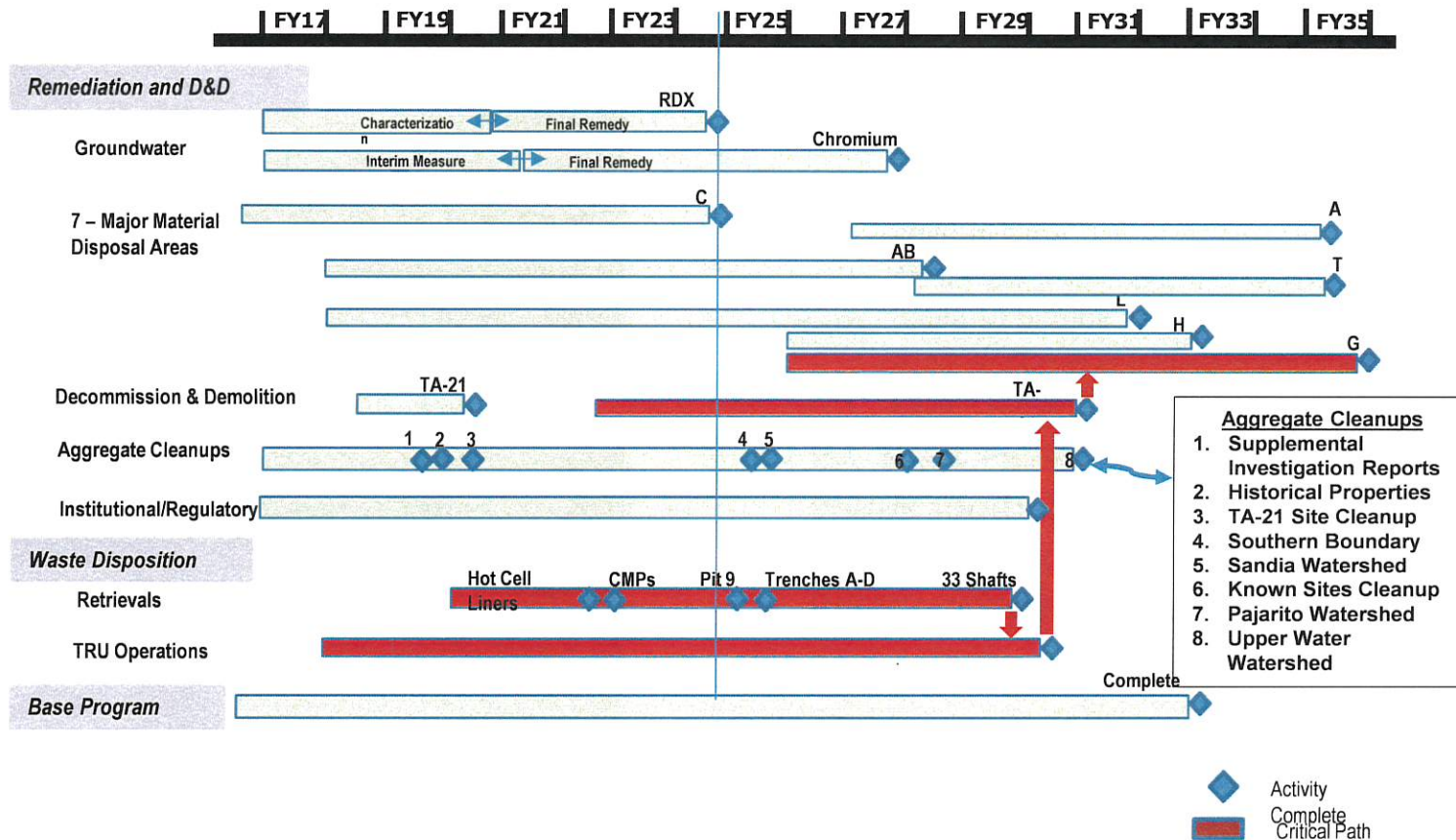
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Lifecycle High Level Schedule



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Consent Order Status



*Workers use an angled drilling rig at the
CrIN-4 site*



The closed vault at injection well CrIN-5

❑ Chromium Interim Measure and Characterization Campaign

- The Interim Measure is underway
- Interim Measure involves pumping and injection to control plume advancement and shrink footprint
- FY 2018 accomplishments include:
 - Drilled angled injection wells to meet injection objectives while avoiding sensitive cultural sites
 - Installed pumps, pipelines and treatment systems.
 - Well pads and pipelines were located to avoid sensitive cultural sites
 - Significant advancements in site conceptual model and modeling in support of remedy evaluation
 - Deployed amendments for field pilot-scale testing of potential in-situ remedy
 - Installed over 3 miles of pipeline, booster pump station, concrete well-head vaults, instrumentation and controls
 - Installed centralized water treatment system



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Consent Order Status (continued)



*The monitoring well R-68 was drilled in
FY 2017.*

❑ RDX Characterization Campaign

- Drilled well R-69 to refine conceptual model for RDX pathways into regional aquifer
- Sampling at R-69 will begin in November
- Including R-69, there are nine wells monitoring the regional groundwater as part of the RDX Characterization Campaign
- RDX has been detected above the screening level in one well (R-68), which is located more than three miles from the nearest drinking water well
- Deep Groundwater Investigation Report is due to NMED by August 31, 2019
- The report will discuss the fate and transport of RDX in regional groundwater and include a groundwater risk assessment to assess the potential for unacceptable risk to human health due to exposure to RDX in groundwater



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❑ Waste Shipments

- N3B stood up mobile loading at Area G, enabling waste shipments to WIPP
- On October 4, 2018, N3B completed the first shipment of waste from Area G to WIPP since WIPP reopened
- The shipment contained OSRP waste from the NNSA program
- Future Area G shipments to WIPP will consist of legacy transuranic waste



N3B waste management staff prepare the waste shipment for transport to the Waste Isolation Pilot Plant.



The waste management teams for EM-LA and N3B gathered to mark the completion of the first waste shipment





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Budget

- ❑ Final FY 2019 budget bill allocated \$220 million for EM mission at LANL
 - As with FY 2018, increase of \$28 million from the President's Request of \$191.6 million



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Los Alamos Legacy Cleanup Contract

- ☐ **N3B Contract was awarded on December 6, 2017 and Transition commenced on January 25, 2018**
- ☐ **Transition ended on April 29, 2018 – N3B started on April 30th**
- ☐ **Unique transition that required N3B to standup business lines such as finance, human resources, payroll, information technology, and reporting**
- ☐ **“Safe in 90” – a safe and compliant resumption of operations – completed on August 1, 2018**



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